R E P O R T R E S U M E S

ED 016 747 UD 005 386

EPOCH, EDUCATIONAL PROGRAMMING OF CULTURAL HERITAGE--ESEA TITLE III SUBMISSION OF PACE FOR CONTINUATION GRANT.

BY- MONFORT, JAY AND OTHERS
BERKELEY UNIFIED SCHOOL DISTRICT, CALIF.

PUB DATE 67
GRANT OEG-4-6-001423-0912
EDRS PRICE MF-$0.50 HC-$2.40 58P.

DESCRIPTORS- *FEDERAL PROGRAMS, *PROGRAM PLANNING, *HUMANITIES INSTRUCTION, *INSTRUCTIONAL TECHNOLOGY, *RESOURCE CENTERS, *EDUCATIONAL INNOVATION, PROGRAM PROPOSALS, EDUCATIONAL RESEARCHERS, CURRICULUM DEVELOPMENT, EDUCATIONAL OBJECTIVES, PERSONNEL, RESOURCE MATERIALS, CONSULTANTS, PROGRAM EVALUATION, EDUCATIONAL NEEDS, INFORMATION RETRIEVAL, INTERDISCIPLINARY APPROACH, BERKELEY, CALIFORNIA, EPOCH, ESEA TITLE 3

DESCRIBED IN THIS REPORT IS A PROJECT WHICH OFFERS INTERDISCIPLINARY HUMANITIES INSTRUCTION THROUGH EXTENSIVE MULTIMEDIA RESOURCES, INNOVATIVE TEACHING METHODS, AND ADVANCED EDUCATIONAL TECHNOLOGY. THE PROJECT, STILL IN THE PLANNING STAGE, WILL ULTIMATELY BE HOUSED IN A SCIENTIFICALLY DESIGNED RESOURCE CENTER WHERE EDUCATIONAL EXHIBITS, INFORMATION RETRIEVAL SYSTEMS, AND SPECIAL TEACHING DEVICES WILL FACILITATE LEARNING, TEACHING, AND TEACHER TRAINING. IN ONE SECTION OF THE REPORT SUCH MAJOR PROJECT ACTIVITIES AS THE RESEARCH PROGRAM, CURRICULUM STUDY, ACQUISITION OF RESOURCE MATERIALS, AND SEARCH FOR SPACE AND DESIGN DEVELOPMENT ARE DISCUSSED, AND IN AN ADDITIONAL SECTION THE PILOT PROGRAM WHICH WILL EMERGE FROM SOME OF THESE PLANNING ACTIVITIES IS DESCRIBED. ALSO PRESENTED ARE TENTATIVE DIAGRAMS OF THE RESOURCE CENTER AND CERTAIN TEACHING DEVICES. (LB)

ESEA TITLE III
SUBMISSION TO

pace epoch

FOR CONTINUATION GRANT

EDUCATIONAL PROGRAMING OF CULTURAL HERITAGE

05386

ED016747

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

PROJECT NO. 1423 GRANT OEG-4-6-001423-0912

SUBMITTED BY
BERKELEY UNIFIED SCHOOL DISTRICT
NEIL V. SULLIVAN SUPERINTENDENT

E P O C H

Address of Pilot Activities: 1900 Addison Street
Berkeley, California 94704
Telephone: 849-3191

Berkeley Unified School District

Dr. Neil V. Sullivan — Superintendent
Dr. Harold Maves — Assistant Superintendent
Mr. Jay Monfort, Coordinator of Instructional Materials Director for EPOCH

EPOCH Staff

Dr. James Jarrett, Senior Project Adviser
Dean, School of Education, University of California

Miss Dorothy A. Bennett — Project Coordinator
Dr. Mark Luca — Research Coordinator
Miss Jeanne Palmer — School Coordinator
Mr. Walter Brooks — Design Coordinator
Mr. Allan Goldstein — Library Coordinator

Research Staff

Mrs. Effie Clark
Miss Lucile Czarnowski
Mrs. Vera-Mae Frederickson
Mr. Armand Gentile
Mrs. Virginia Gregory
Mr. William Kennedy
Dr. Spiro Kostof
Dr. George Kyme
Mr. Jay Manley
Dr. Betty Ng
Mr. Gary Reed
Dr. Virginia Richmond
Mr. Ancel Tikasingh
Mr. A.J. Tudisco

School Advisers

Mr. Paul Albright
Mr. David Beery
Mrs. Margaret Branson
Broth Joseph
Sister Francesca Cabrini
Mr. John Cleveland
Mr. Stanley Cohen
Mrs. Helen Cyr
Miss Joan Cunnings
Mr. Harold Davis
Mr. Charles Dominic
Mr. Arthur Dougherty
Mrs. Kathryne Favors
Mr. Armand Gentile
Mr. Norman Gilbert
Mr. Allan Goldstein
Mrs. Virginia Gregory
Mr. Robert Hall
Mr. Thomas Haynes
Mr. George Kreshka
Mrs. Sara McGragh
Miss Joanne McHenry
Mr. Astor Mizuhara
Mr. George Noone
Mr. Charles Oliver
Mr. Robert Pearl
Mr. Robert Rajander
Mr. Robert Rice
Mr. Anthony Rinaldi
Dr. Joseph N. Rodeheaver
Mr. Robert Shogren
Sister Mary Christine
Mrs. Patsy Tanabe
Mr. Al Templeman
Mrs. Virginia Thickens
Mr. Martin Tucker
Dr. Herbert Wong
Mrs. Alice Zollinger

Office Staff

Mrs. Nancy Curry
Mrs. Betsy Hethington
Mrs. Zoe Porter
Miss Diane Newhouse
Mrs. Carlyle Rispoli

TABLE OF CONTENTS

INTRODUCTORY MATERIAL

Introduction 1

Directions for EPOCH 2

Section Plan for EPOCH Building 1964 3

PART I

Application for Continuation 4

PART II

Results of the Planning 5

RESEARCH 6

EPOCH Card Direction Sheet 7

Academic Background of the Researchers 8

Notes for Researchers 11

Brief Review of Work of the Researchers 12

CURRICULUM STUDY 14

General Educational Objectives 15

Curriculum and Evaluation Planning 18

School Advisers 19

Evaluation 21

SELECTION OF STAFF 23

SEARCH FOR RESOURCE MATERIALS AND EQUIPMENT 24

SEARCH FOR SPACE AND PROGRESS DESIGN DEVELOPMENT 25

Demonstration Space (drawing)

CONSULTANTS 26

RESULTS RELATED TO EXPECTATIONS 27

GREATEST CHANGE RESULTING FROM PROJECT 28

COOPERATION WITH OTHER AGENCIES 29

DISSEMINATION 30

PLANS FOR SUPPORT STRUCTURE 32

APPLICATION FOR EXTENSION 33

PART III

Operational Relationships 34

ADDITIONAL EDUCATIONAL NEEDS 35

OBJECTIVES RELATED TO NEEDS 36

ACTIVITIES IN SEQUENCE TO BE CARRIED OUT 37

General Order of Progression

Improvement of Demonstration Areas 38

Demonstration Table (drawing)

Identification and Location of Resource Materials 39

Detail of Demonstration Wiring (drawing)

Interdisciplinary Planning

Cooperative Teaching 40

Interdistrict Cooperation

Cooperation with other ESEA Projects

Teacher Education

EPOCH View Box (drawing)

Evaluation Studies 41

Consultant Program

Educational Agencies

Community Support Base

Design Drawings

Dissemination

Resource Bank (drawing)

METHODS AND PROCEDURES FOR EVALUATION 42

APPENDIX

Selections from the EPOCH Calendar E, F, G

Map of Area to be Served H

Letters

INTRODUCTION

EPOCH proposes to develop ways to improve understanding and teaching of man's cultural heritage through the production of imaginative instructional methods, extensive resource materials and the most advanced technology. The emphasis of the project will be on arts and humanities: art, architecture, literature, music, theatre, the dance, geography, anthropology, history, philosophy, religion, history of science and their interdisciplinary relationships.

The current emphasis on specialization in education has produced a great need for sound innovative methods to help students and teachers to join islands of information with bridges of knowledge to broaden their perception and deepen their understanding of the forces that shape man's cultural history.

The ultimate goal is to creat new types of learning experience in a scientifically designed environment for coordinated learning--the EPOCH RESOURCE CENTER, seen as the outgrowth of an extended planning period. Here exemplary programs will synthesize the comprehensive resource collections with a broad range of instructional techniques to show the interrelation of time and space in the growth of human cultures. Multi-projection, educational exhibits, information-retrieval systems, teaching devices for inquiry training and learner participation will be coordinated in facilities for discovery, learning and teacher training.

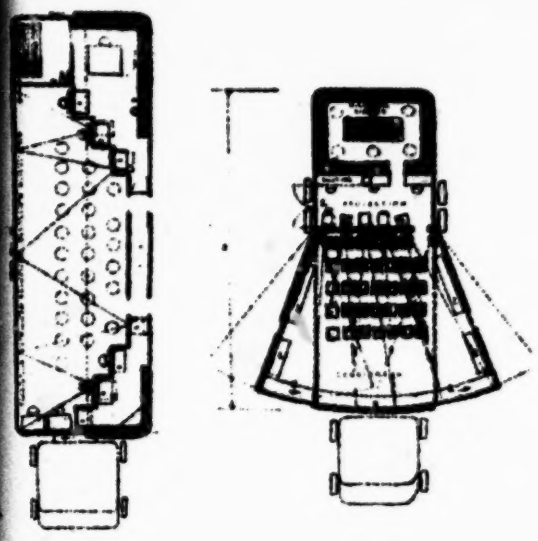
EPOCH has been developing for a number of years and in 1966 an ESEA Title III planning grant (Public Law 89-10) was awarded to the Berkeley Unified School District. The progression of the project is now seen in the following stages.

Phase I - Planning Period - A small staff has experimented with mock-ups of the demonstration. A search for and organization of resource materials has been undertaken. The orientation table and innovative teaching devices have been tried out. Plans for future stages have been further developed. (Termination - late Spring 1967)

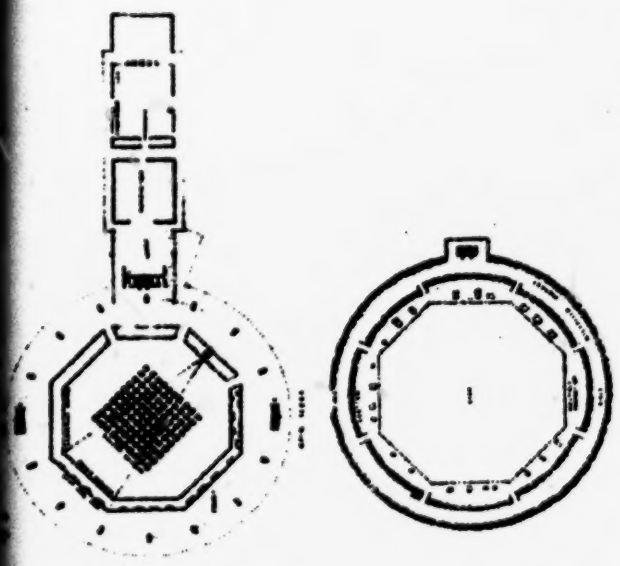
Phase II - Pilot Activities - Enlarged program with experimental participation of teachers and students. Summer workshop. Acquisition and development of resources, and equipment. Demonstration development and evaluation. (Proposed for Fall 1967--Spring 1968)

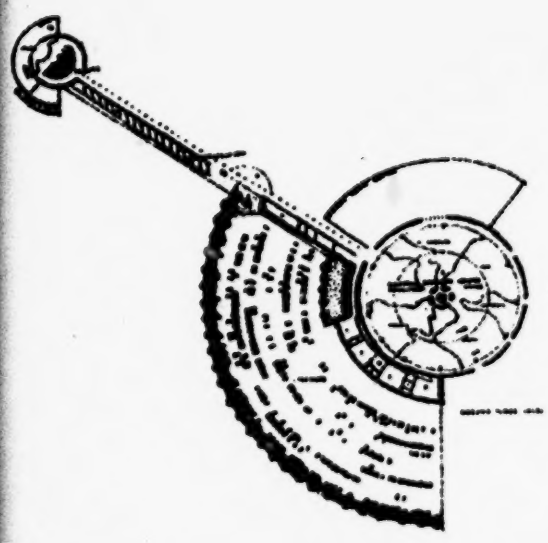
Phase III - Operational - Full schedule of program development. Student visits and teacher training. Design development, a new type of teaching installation.

Pages two to four are from earlier proposals. Part II (January 1967) describes the activities of the planning period. Part III briefly forecasts the program of some of the proposed planning activities.



B





Some of the directions for

EPOCH: T H E R E S O U R C E C E N T E R
for Educational Programming of Cultural Heritage

which have been proposed

A. MOBILE FIELD TEST PILOT

Programmed as desired for schools, the demonstrations would coordinate the use of slides, films, sound, charts, maps, realia, auto-instruction devices, etc.

B. CLASSROOM CENTER

Projection chamber permits use of films, slides, records, tapes, inquiry-training devices, prints, charts, maps, realia, as well as for the storage of above materials for use in the demonstrations.

C. SUPPLEMENTARY CENTER

A self-contained, 1 1/2 level building which could serve a consolidated school district or a large city school system. Has projection chamber, exhibition, and storage areas as well as classroom, a lobby and orientation room, office, shop and services.

D. REGIONAL CENTER

A fully developed educational complex with large demonstration auditorium with multi-projection, TV; exhibition hall with permanent and changing displays and self-testing devices; information-retrievable file and repository. Associated study cubicles, seminar rooms, music room, shop, theatre, lab. and other features.

Upper Floor for School and Public Demonstrations

A continuous, circular seating platform faces the outer wall. It can be divided into separate, independent sections for simultaneous presentation of several different programs.

From a central control tower, projection equipment can throw many different images simultaneously. (Still and/or motion pictures) The multiple projectors can also build up a continuous coverage entirely around the room.

Sound can be controlled from the tower. Public address systems can connect speakers' podiums with audience earphones. Closed-circuit TV could provide viewing, monitoring for the speakers. All systems can be programmed in advance; classrooms receive pre-visit TV orientation.

Ground Floor Exhibition Hall (Entrance Level)

A large central exhibition hall is arranged to show clearly the basic plan of the entire Cultural Resource Center--interlocking paths of time and space. Among the exhibits in the hall could be: Permanent and temporary displays. Three-dimensional models, artifacts and replicas. Programmed studies in art, architecture, in anthropology, history and many other fields. Automatic tape and record players, projectors, and other auto-education devices. Illuminated transparencies, overlaid maps. Animated charts. A great variety of aids for creative teaching.

A large circular corridor surrounds the exhibition hall. Off the corridor are rooms serving different purposes: Offices. Library. Preview area for new equipment. Orientation chamber. Music Center. Theatre Arts and Dance Chamber. Teachers' Experimental Laboratory. Demonstration area. Seminar. Meeting Rooms. Darkroom. Cubicles and lockers for research workers. Lounge and other service rooms for the public.

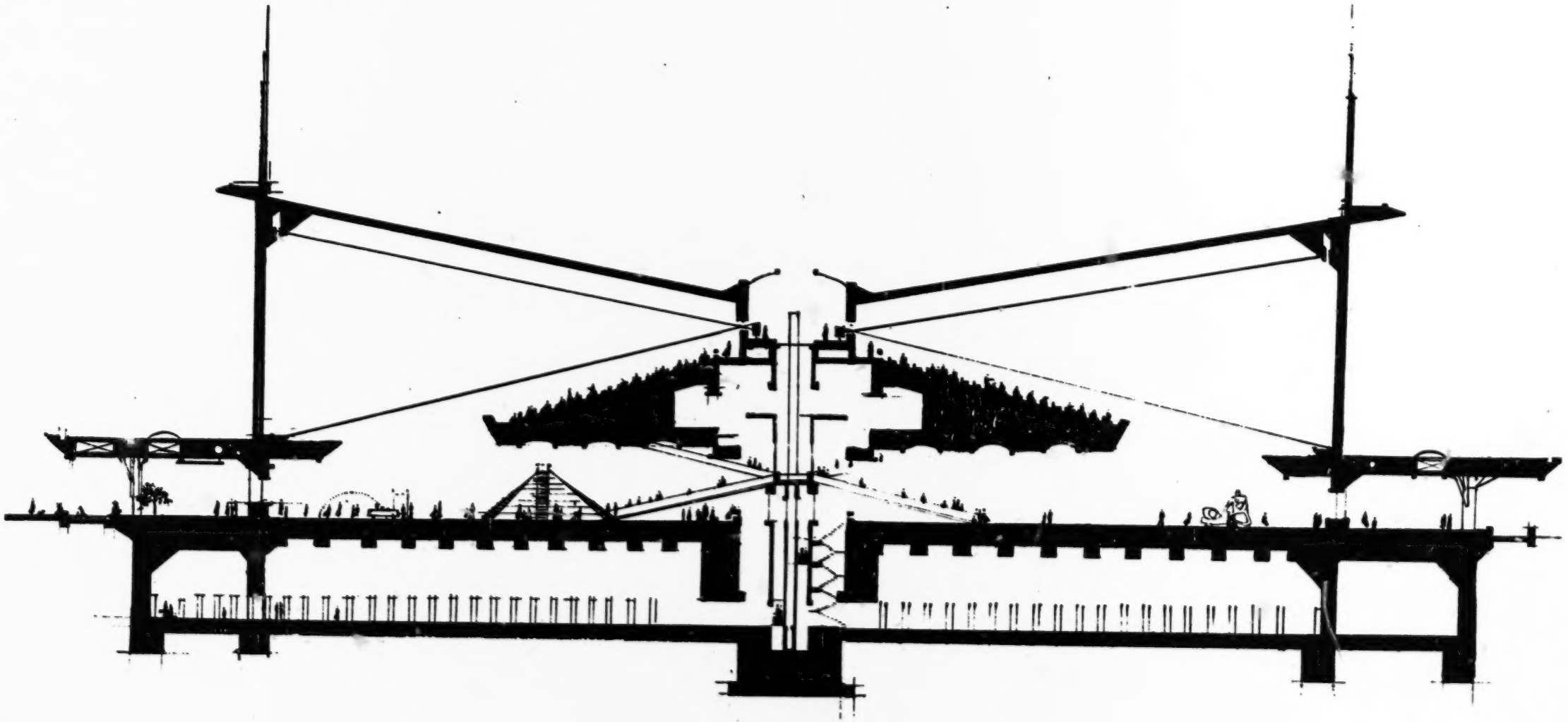
Lower Floor Comprehensive Materials File

Resource information retrievable reference file. Programming department. Slides. Films. Microfilm storage stacks. Photos. Prints. Records, documents, tapes. Charts. Maps. Programmed materials. Catalogues. Bibliographical file. A research facility for depth and comparative studies for upper level students and adult education and teachers.

Also included are a theatre for the performing arts, TV studio, carpenter and machine shops, display construction, storage, delivery, loading and service areas.

CROSS SECTION THROUGH A CIRCULAR BUILDING

POSSIBLE PLAN FOR E P O C H (1964)



PART I

APPLICATION FOR CONTINUATION

BERKELEY UNIFIED SCHOOL DISTRICT
1414 Walnut Street, Berkeley, California 94709

E P O C H #1423
Grant Number OEG-4-6-001423-0912
C A L I F O R N I A
six months ending February 28, 1967
+ 60-day extension to April 30 on original funds

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965 (P.L. 89-10)
TITLE III DATA FORM

THIS BLOCK FOR U.S.O.E. USE ONLY	PROJECT NUMBER	STATE CODE	COUNTY CODE	REGION CODE	STATE ALLOTMENT

A

1. REASON FOR SUBMISSION OF THIS FORM (CHECK ONE):

(a) ☐ INITIAL APPLICATION FOR TITLE III GRANT OR RESUBMISSION OF DISAPPROVED PROJECT (b) ☒ APPLICATION FOR CONTINUATION GRANT (c) ☐ END OF GRANT PERIOD REPORT

2. FOR ALL PURPOSES EXCEPT INITIAL APPLICATION GIVE PREVIOUS PROJECT NO.: 1423

B

1. MAJOR DESCRIPTION OF PROJECT: (CHECK ONE ONLY) (a) ☐ INNOVATIVE (b) ☒ EXEMPLARY (c) ☐ ADAPTIVE

2. TYPE OF ACTIVITY: (CHECK ONE OR MORE) (a) ☐ PLANNING OF PROGRAM (b) ☐ PLANNING OF CONSTRUCTION (c) ☒ CONDUCTING PILOT ACTIVITIES
(d) ☐ OPERATION OF PROGRAM (e) ☐ CONSTRUCTING (f) ☐ REMODELING

C

1. PROJECT TITLE: EPOCH Pilot

2. BRIEFLY SUMMARIZE THE PURPOSE OF THE PROPOSED PROJECT AND GIVE THE ITEM NO. OF THE AREA OF MAJOR EMPHASIS AS LISTED IN SEC. 303 P.L. 89-10 (SEE INSTRUCTIONS). ITEM No. 1C

3. Berkeley Unified School District
NAME OF APPLICANT (LOCAL EDUCATION AGENCY)

4. _____ 5. 7
COUNTY NAME (APPLICANT) CONG. DISTRICT (APPLICANT)

6. 1414 Walnut Street, Berkeley, California 94709
STREET ADDRESS (APPLICANT) CITY STATE ZIP CODE

7. Jay B. Monfort THornwall 1-1422, A.C. 415
NAME OF DIRECTOR TELEPHONE: AREA CODE, LOCAL,

8. 1720 Oregon Street, Berkeley, California 94703
STREET ADDRESS (DIRECTOR) CITY STATE ZIP CODE

9. Neil V. Sullivan THornwall 1-1422, A.C. 415
NAME OF PERSON AUTHORIZED TO RECEIVE GRANT TELEPHONE: AREA CODE, LOCAL,

10. Superintendent, Berkeley Unified School District
POSITION OR TITLE

11. 1414 Walnut Street, Berkeley, California 94709
STREET ADDRESS CITY STATE ZIP CODE

_____ _____
DATE SUBMITTED SIGNATURE OF PERSON AUTHORIZED TO RECEIVE GRANT

PART II

PLANNING ACTIVITIES

BERKELEY UNIFIED SCHOOL DISTRICT
1414 Walnut Street, Berkeley, California 94709

E P O C H #1423
Grant Number OEG-4-6-001423-0912
C A L I F O R N I A
six months ending February 28, 1967
+ 60-day extension to April 30 on original funds

PART II

1. b. RESULTS OF THE PLANNING

The major activities of the planning period were in these main areas.

Selection of participants in RESEARCH PROGRAM, development of procedures and the gathering and analyzing of data.

Selection of school advisers, development of the plan for CURRICULUM STUDY and the identification of curriculum needs.

Selection of OFFICE STAFF, organization of the administrative procedures, and support research, curriculum and design activities.

Identification of RESOURCE MATERIALS and investigation of audio-visual equipment.

Search for SPACE and beginning of DESIGN DEVELOPMENT.

Experimental work on DEMONSTRATION VISUALIZERS.

Identification of CONSULTANTS and beginning of consultation inquiry.

Planning of EVALUATION procedures.

The six months' grant was awarded April 28, 1966 with an end-date of February 28, 1967. It was agreed that work could begin anytime, that monies could be available June 1, 1966, but that no funds would be available after February 28, 1967. The formal beginning date was set for September 1, 1966 to coincide with the school period and availability of teachers for consultation.

No space for full staff was available for EPOCH at the Berkeley Unified School District or the University of California during the period June - October 15. Temporary quarters in Tolman Hall at the University were used until space was found at 1900 Addison Street, Berkeley.

RESEARCH

The initial concerns of the research program were the development of a suitable card to store and retrieve classified information and the selection of specialists to guide the EPOCH Staff.

Dr. Mark Luca, Supervisor of the Teaching of Art in the School of Education, University of California, Berkeley, coordinated the research program in consultation with Dr. James Jarrett, Associate Dean of the School of Education there. They made the first steps in the development of the EPOCH Data Card during the summer. In September the staff reviewed retrieval systems and revised the card many times on the basis of experimental use before it was turned over to the researchers for recording their findings.

The 5" x 8" EPOCH Data Card carries over 140 descriptive items on its periphery which can be hand-punched for box-rod sorting. Some 20 additional items on the face of the card call for information too specialized to be carried on the sorting edge. The back of the card provides room for additional data.

Among the classifications that can be marked for visual review or notched for multiple sorting are date and geographical location. The date margin can sort to within five years back to 1000 B.C., in larger units thereafter, but of course the unique material on the card face carries exact date when known. Geographical location is keyed to standard coordinates, using divisions of 15 degrees which correspond to index of the map supplied to the researchers. The continents can be indicated by notches.

The following areas of interest can be noted on the margins of the card which can be notched: anthropology, archeology, architecture, art, dance, drama, education, geography, history, literature, music, philosophy, religion, natural and physical science, social and political science.

The nature of the resource material can be indicated: book, disc recording, document, filmstrip, graphics, interview, map, microfilm, motion picture, original, periodical, performance, questionnaire, reproduction, slide, tape recording, TV kinescope or video. Space is also given to mark 3-D, 2-D, audio, visual, loan or purchase. Evaluation registers excellent, good, poor. It is possible to show suitability for a particular school age division, including primary, elementary, secondary, college or for adults. If the material is well-suited for use with students with special problems, this can be signalled.

If the card contains information on a resource person or place, the margin indicated this and it is spelled out in the specialized material on the face of the card. The card face asks the researcher to supply complete name of author or artist, birthdate and place, title of work, date and place of the original, availability for loan or purchase and a number of other items of information.

About 3000 cards have now been completed by the researchers and are being reviewed by the staff.

Transition, at a later date, to electronic processing has been kept in mind from the beginning--but the experimental period has demonstrated the value of the EPOCH Data Card for visual storage and retrieval of reference information.

GENERAL DIRECTIONS FOR USING EPOCH DATA CARDS

Supply as much information as you can. If doubtful use "?".
MARK the edge of the card with felt pen or ink and be sure to go to the edge.
WRITE information - type or print - information in the center and use back of card if necessary.

MARK the # of the time zone key map. (e.g. 24 + 20).

If several continents, MARK continent

WRITE in specific date, if known.

MARK one or more to bring date below to more exact date.

MARK closest century and in addition mark above (+50, +25, +10 and/or +5) For example, if exact date is 1890, MARK 1800, +50, +25, +10 and +5. As another example, 6200 B.C., MARK 6000 B.C. which would be close enough

Mark the letter of the location on the key map. Leave blank if you do not have a map.

MARK the main catagory or catagories.

Leave blank

MARK the proper catagory in the list, which starts with "Resource Person" and ends with "AUD" (audio), "VIS" (visual), 2D (2 dimensional) 3D (3 dimensional) TVV (TV vidio), TVK (TV kinescope) etc.

MARK if a survey of several dates.

MARK your evaluation of the quality of the material

MARK one or more grade levels - where material might be appropriate

2D or 3D Audio Visual or material leave blank

or leave blank

Exact
+50
+25
+10
+ 5
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
AD-BC
100
200
300
400
500
600
700
800
900
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
10000
Survey

Survey | Africa | Europe | Asia | Australia | Oceana | N America | C America | S. America

1 2 3 4 5 6 7 8 9 +10 +20

Key to MAP Location

Description
Write in the City, Town or Area

EPOCH DATA CARD

Berkeley, Calif.

Title
Write in the Title of the Book, Picture, etc.

Originator (Author, Artist, Designer)
Write in the name of the author, artist, etc.
Last name First Middle

Nationality

Location of Original City or Country

Date of Original If Known

Publisher Name of Publisher

Place Place of Publication, Origin, etc.

Date Date of Publication, Origin, etc.

Published in: Edition, Vol., Series
Write in if it applies

Place "

Date "

Lib. of Congress No.
Write in if Available

Leave Blank Epoch File

Who, Where, etc. *Resource Pers

" " *Resource Plac

Availability Where can this be Borrowed or Bought? Write in the Most Convenient Places.
Loan Purchase Price of Single Series $

Comment*
Write in any Facts, Observations, Any Information That Will be Helpful in its Description, use and Acquisition.
(over)

Researcher Date
Your Name

Who, Where, etc.*
" "

Eval. | Exc. | Good | Poor | Prim. | Elem. | Secon | Coll. | Adult | Spec. | Aud. | Vis. | 2 D | 3 D | TVV | TVK | Tech. | Loan | Purch

A B C D E F G H I J K

ANThropology
aRcheoloGY
ARChitecture
ART
DANce
DRAma
EDUcation
GEOgraphy
HIStory
LITerature
MUSic
PHIlosophy
RELigion
Na. & Phy. Sci
So. & Pol. Sci

book
disk recordin
document
film strip
graphics
interview
map
microfilm
motion pictur
original
periodical
performance
questionnair
reproduction
slide
tape

Dr. Luca engaged 14 specialists to work in their own fields on a contract basis. This plan offered better results than the original idea of four half-time research assistants.

After several interviews, the researchers were given our outline of their duties, a packet of the EPOCH Data Cards and a guide sheet for using the cards. They were also given a large map with accompanying atlas to relate geographical data to the key in the card.

Academic Background of the Researchers

ANTHROPOLOGY-ARCHEOLOGY: Mrs. Vera-Mae Frederickson

B.A. in Humanities, University of Minnesota
M.A. in Anthropology, University of California, Berkeley

At present a museum technician at the Lowie Museum of Anthropology, University of California. She has also worked as an elementary teacher and archeological field worker.

ARCHITECTURE: Dr. Spiro Kostof

B.A. in Humanities, Robert College, Istanbul, Turkey
M.A. in Architecture, Yale University
Ph.D. in Architecture, Yale University

Teaching experience at Yale and now teaching the history of architecture at the University of California, Berkeley. Extensive travel in Europe and the Middle East. Contributor to the World Book Encyclopedia of Art. Author of The Orthodox Baptistery of Ravenna: Yale University Press, 1965 and The Rock Churches of Cappadocia: World Publishing Company, 1967 (forthcoming).

ART (WEST): Mrs. Virginia Gregory

B.A., Skidmore College, Saratoga Springs, New York
Other work at Art Student's League, New York; College of Arts and Crafts, Oakland; City College of New York; and University of California, Berkeley.

Teaching credentials from California College of Arts and Crafts, Oakland.

ART (EAST): Dr. Betty Ng

M.A., University of British Columbia, Vancouver, Canada
Ed.D., University of California, Berkeley
Graduate Certificate, University of Southampton, England
Diploma in Art, London Art College, England

A practicing artist of Oriental painting. Born and studied in the Orient.

DANCE: Miss Lucile Czarnowski

B.A., University of California

Has studied with many of the leading dancers and has travelled in Europe to study folk dancing. She has taught dance in elementary and secondary schools and at the University of California, Berkeley where she is Emeritus. She has published several books and has given dance institutes throughout the country.

DRAMA: Mr. Jay Manley

B.A. San Francisco State College

Presently, Director of the Drama Program at Berkeley High School.

EDUCATION: Mr. Ancel J. Tikasingh

B.A. in Social Science, Eastern Nazerene College, Quincy, Massachusetts
M.A. in Psychology, Boston University
M.A. in Education, Harvard University

Currently a Ph.D. candidate at the University of California, Berkeley.

HISTORY and SOCIAL SCIENCE (WEST): Mr. Armand Gentile

B.S. in English and History, University of San Francisco

Writer and speaker for 15 history programs, Channel 5 Television
High school teacher in San Ramon District since 1955.
Has taught at College of San Mateo.

HISTORY and SOCIAL SCIENCE (EAST): Mr. A.J. Tudisco

B.A. in Anthropology, University of California, Berkeley.
M.A. in Anthropology, University of California, Berkeley.

East-West Center Scholarship (1965-1966).
Sabbatical study and travel in Asia (1966).
Author of Asia Emerges, Diablo Press, 1966.

LITERATURE: Mr. William A. Kennedy

B.A. in English, Long Beach State College
M.A. in English, Long Beach State College

English teacher at Berkeley High School since 1958.
Additional study at Columbia University, New York.

MUSIC: Dr. George Kyme

Ph.D. in Music Education

High school teacher and presently, Professor of Music Education, School of Education, University of California, Berkeley.
University of California Project Director of Health, Education and Welfare, Project Number 254.

PHILOSOPHY: Mr. Gary Reed

B.A., University of Pittsburg, Pittsburg, Pennsylvania
M.A., University of California, Berkeley.

Currently a Ph.D. candidate at the University of California, Berkeley.

RELIGION: Mrs. Effie M. Clark

B.A., University of California, Berkeley
M.A., in Philosophy and Religion, Howard University, Washington, D.C.
B.D., Pacific School of Religion

Presently working toward a Master of Religious Education.
Has worked for five and one-half years as a social worker.

NATURAL and PHYSICAL SCIENCE: Dr. Virginia Richmond

M.S., Oaklahoma Medical School, Oaklahoma City, Oaklahoma
Ph.D., University of Washington, Seattle, Washington

Presently doing post-doctoral research in the Department of Nutritional Sciences, University of California, Berkeley.

Notes for Researchers for Project EPOCH

EPOCH seeks to develop ways to improve the understanding and enrich the teaching of man's cultural heritage. The emphasis will be on the humanities and information will be sought in the fields of anthropology and archeology, art and architecture, dance, drama, geography, history, language and linguistics, literature, music, philosophy and religion, as well as history of natural and physical sciences, social and political science.

The work of the researchers will fall into four main areas: the preparation of a basic outline giving an overview of the research person's subject through all time, the EPOCH Data Card, a detailed commentary, and finally a few hours of consultation with the EPOCH staff on the integration of their findings into the project "visualizers".

The researcher's time might be divided roughly thus: one-third outline with some supporting cards, one-third cards largely devoted to assembling supporting data on the cards and one-third commentary.

THE OUTLINE in Historical Sequence

Essential milestones in your subject in chronological order
1. Men movements works --- the most important of these
2. Motivating forces behind them
3. Significant influences on relations with other disciplines

Form of outline
1. Topical - brief annotations clarifying the entries
2. In duplicate (one for EPOCH staff, carbon for researcher)
3. Data and references here backed up by EPOCH Data Cards

Uses of the outline
1. Guide researcher in detailed search for books, documents, periodicals, records, tapes, reproductions, slides, filmstrips, motion pictures, microfilm, maps, etc. (Be sure to note length, time required, for films, tapes, etc.)
2. Offer researcher framework for comprehensive commentary
3. Provide EPOCH staff with basis for preliminary planning

EPOCH Data Cards - see separate sheet for directions on card with example

Classified information on all items studies
1. Direct data recording with felt pen on margin shows time, place nature/vehicle of object, etc.
2. Requests additional information to be written in name of author/artist, nationality, date, date and place of original and other numerous data. If published: publisher, date, place, edition, volume, series, etc.
3. Please look for as much varied source material as possible (see above, Uses of the Outline, -1), also resource persons, places, live performances (with names, addresses and other particulars).

THE DETAILED COMMENTARY

Will develop the outline in detail for the period 1750-1850.
Rough draft of commentary, November 10,
Final comprehensive commentary December 9
Consultations with EPOCH staff in the period November - January

Brief Review of Work of the Researchers

ANTHROPOLOGY

Mrs. Vera Mae Frederickson has produced a review of the newest dating of fundamental periods around the world, and current views on patterns of culture, cultural growth and spread, civilizations of the past and societies and institutions of the present day.

ARCHITECTURE

Dr. Spiro Kostof, with his study and travels in the Near East has presented us with a comprehensive outline of the high points in architecture around the world. He has made the report more detailed for the period 1750-1850 with an emphasis on American architecture. New methods of teaching architecture being of special interest to Dr. Kostof, he has included some suggestions in this area.

ART - WESTERN

Mrs. Virginia Gregory, with special help from Mr. Templeman, one of our curriculum consultants, has constructed several attractive charts showing the interrelation of art to the general flow of history.

ART - EASTERN

Dr. Betty Ng, a practicing artist from the Orient and a researcher with teaching experience in Oriental art, has given us material starting with the Stone Age in Japan, the Neolithic period in China, the Indus Valley Period in India and ending with the present. In addition she has given us copies of her art history outlines and notes.

DANCE

Miss Lucile Czarnowski, emeritus at the University of California, has presented us with folk, classical and modern dance material, related to the historical and cultural background from the Egyptian period to the present. The material relates to drama, music and other allied fields. She has prepared an introduction to the significance of the dance to society and to the individual. In addition she gave us a copy of one of her books on the teaching of the dance.

DRAMA

Mr. Jay Manley, director of drama at Berkeley High School has presented an outline of the high points in the history of drama from early history to the present. His EPOCH Data Cards include useful information of resource persons and performances.

EDUCATION

Mr. Ancel J. Tikasingh, a doctoral candidate in Education from the West

Indies has given us an outline of the important concepts, schools of education and educational leaders from 2300 B.C. to the present. This includes an outline and more detailed material in the 1750-1850 period.

SOCIAL SCIENCE AND HISTORY - WESTERN

Mr. Al Gentile, history teacher at Monte Vista High School, has drawn some historical charts and prepared outlines of the social and historical high points throughout history.

SOCIAL SCIENCE AND HISTORY - EASTERN

Mr. A. J. Tudisco, who teaches Oriental history and has written and travelled in the Orient, has given us an outline of the history of China, Japan and India from the earliest times to the present.

LITERATURE

Mr. Kennedy, English teacher at Berkeley High School, has worked with an outline of the history of literature from early history to the present. His EPOCH Data Cards will guide EPOCH to documentary resources and visual materials on drama and world literature.

MUSIC

Dr. George Kyme has turned in 300 EPOCH Data Cards, itemizing well known and little known resource materials in music, including phonograph records, tapes and motion pictures. In addition, he has written a comprehensive outline of the important musical history in the 1750-1850 period.

RELIGION

Mrs. Effie Clark, the religious specialist, searched out basic milestones within her field and also brought to light new aspects of religious history and supplied unusual material on religion as a factor in Negro life from earliest times to the present.

NATURAL AND PHYSICAL SCIENCE

Dr. Virginia Richmond, a post-doctoral researcher at the University of California, Berkeley, has presented an outline of man's technological and scientific achievements from 100,000 B.C. to the present. She has included photostats of charts and documents as well as a group of EPOCH Data Cards.

Although the large part of the work contracted for has been completed, researchers later will consult with EPOCH Staff on the integration of their findings with the Resource file of EPOCH, the implementation of the demonstration and the next steps in further developing information and resource materials in their areas of specialization.

CURRICULUM STUDY

An investigation of the curriculum enrichment needs was undertaken by Miss Jeanne Palmer EPOCH School Coordinator, who is Art Consultant to the San Ramon Valley Unified School District. She brought together a group of school people from the participating Bay Area school districts including administrators, curriculum experts, teachers in elementary and secondary levels, specialists in music, art, literature, history and science as well as interdisciplinary teachers and those representing other areas of special interest.

Through a series of individual consultations, group meetings, several half-day work sessions, the group has reviewed, compiled and charted the major concepts in every subject area for both elementary and secondary schools.

They have pointed out major needs for resource materials to support and enrich the curriculum. In addition to stating their needs they have also supplied information on resource materials and techniques that have proved most effective in their classroom experience.

The limitations of time, resources, staff and equipment made some restrictions necessary for the preliminary demonstration. The curriculum group suggested concentrating on a hundred year period (1750-1850) around the world. However, the orientation of the continued planning will be the comprehensive view through all time even though only segments can be developed in the early stages.

In the meetings of the school advisers, the large group (16-20) has met together to discuss the broad outlines of curriculum needs, the objectives of the experimental program, and the wider educational potentials of Project EPOCH.

Then the sessions continued with small groups focussing on elementary, intermediate and high schools' particular emphases. The small sections then returned to report their findings to the whole group.

Each of the meetings reinforced the conviction of the participants that the interaction between representatives of different disciplines and different educational levels from different districts was challenging and productive. In fact, several members of the group credit these meetings with personal changes of attitude, broader base of understanding and stimulus to more creative teaching.

The school advisers completed EPOCH Data Cards, and prepared outlines of resource materials and techniques which have been particularly valuable in their fields of experience.

One of the advisers has been particularly helpful in the field of technology--generously sharing his time and knowledge of modern teaching equipment and techniques.

Another with broad teaching background and script-writing experience, has volunteered his time and talents to work on the experimental program.

Professional experience of others has brought a creative approach and innovative ideas to the discussions.

EPOCH'S PLAN FOR

INNOVATIVE IDEAS AND TECHNIQUES FOR TEACHERS

FOR ENRICHMENT OF STUDENT LEARNING

GENERAL EDUCATIONAL OBJECTIVES	PROCEDURES	EVALUATION
Stimulate Interest	EXEMPLARY PROGRAMS	Interest
	AND	Information
Enlarge Perceptual Awareness	INNOVATIVE	Vocabulary
	AUTO-INSTRUCTIONAL	Flexibility
Broaden Appreciation	SITUATIONS and DEVICES	Aptitude vs. Outcome
Increase Information	Using	
	MULTI-SENSORY STIMULI	Constructive Change of Attitude
Stimulate Creative Thinking	and	Concept Development
	VARIED ENRICHMENT MEDIA	
Aid Concept Formation	thus providing opportunity for	Creative Thinking
Encourage Flexibility of Learning Approach	Discovery	also assess General Effects of Multi-Media on Learning Achievment and Appropriateness of Media to Different Age Levels
	Self-Testing	
Improve Self-Image	Transmedia Learning	
	Problem Solving	
	Inquiry Training	
	Concept Formation	
	Self-Expression	
	Group Interaction	

After a series of workshop sessions the members of the curriculum advisory committee were asked to submit in writing an outline of the current course objectives and content, the resource materials they have found to be most effective, the teaching strategies that they preferred and why, their hopes for the EPOCH project, and how they felt the focus upon the span of 1750-1850 could relate to and enrich their curriculum. A loan collection of reference texts has been made by cooperating school districts.

Some indication of the broad range of discussions and the specific suggestions that have emerged from just one of these meetings are noted below:

REVIEW OF SCHOOL ADVISERS' MEETING 10/30/66

Al Gentile - Made an appeal for individual experience, calling attention to the pleasure of using the view master even for the very young.

David Beery - Suggested that some of the same choice of subject and variety of visual experience could be attained with the Carousel on a more instructive level.

Hal Davis - Suggested that not only visual and audio effects should be used but all possible multi-media stimuli should be considered.

Jeanne Palmer - Added that segments of films could be combined with audio equipment for better concept development.

Al Templeman - Made a plea for equipment for each teacher so that it would be possible for him to make up film-sound combinations of current events and new findings of use in his own classroom program. EPOCH should provide lab where these techniques could be learned.

Jeanne Palmer - Training courses for teachers are now being held at San Ramon Valley to assist in planning with such current audio-visual aids. It has been very successful in broadening the teacher's view and enriching her presentation.

Tony Rinaldi - The challenge is to develop a plan of what we want to do.

Kathryn Favors - Animation is useful in instruction and if easy inexpensive method could be used it would be helpful. (Consensus: too expensive now.)

Jeanne Palmer - We want involvement on the part of the children.

Dorothy Bennett - Our "discovery corners" are designed to make many opportunities for self-testing and self-instruction. The Resource Bank, earphone tape station, electronic chart, peepholes and pushbutton dioramas should be keyed to demonstration and provide stimulus and guidance for further learning and action.

Tony Rinaldi - Some 8mm cartridges are now available, also audio synchronization. Most single concept resources are now in science, not humanities.

Al Templeman - Video tape in later stage, but Rinaldi suggests nothing within our budget reach yet.

Dorothy Bennett - Suggested cooperation of neighboring colleges and universities.

Al Gentile - EPOCH should provide an experience that is different from the classroom. In EPOCH there must be a framework of meaningful information where films and other supports can be shaped to give a new look to information. He pointed out that peepholes and dioramas were basic motivational units. In a recent demonstration, 500 children crowded at one particular pushbutton diorama.

Isaacs - Experiment with "feeling" 3-D materials. Need for tactile experience was stressed by several members of the group.

Dorothy Bennett - The tactile experience could be thought of as combined with carefully prepared tapes to enlarge the experience - helpful especially to the sightless.

Kathryn Favors - Mentioned a touching wheel used with pre-school children where the experience proved most effective.

Al Templeman - Reminded us of early Bauhaus texture symphony which was a large panel with variations of surface.

Virginia Gregory suggested that creating a mood was important and mentioned museums in Cape Cod, use of models and habitat groups. Importance of versatility was stressed, movable walls, variety of experience.

Dorothy Bennett - What EPOCH should offer is a stimulating, carefully planned environment for enrichment of learning experience, to produce in students increased motivation, change in concepts and attitudes, improvement in study habits, and increase in knowledge.

The group divided into small discussion sections, reporting as follows:

George Kreshka - First section suggested a first stop at a window with a revolving drum. This might be operated by button or crank to preferred place, i.e., San Francisco shown from prehistory onward.
Model - how to tell the story, as child or as adult? It was suggested that pre-school children might choose pictures of children when given a choice but generally children prefer adults as "models".

Tony Rinaldi stressed role of the companion as a favorite device.

Jeanne Palmer suggested the psychological advisers could give us guidance here.

Patsy Tanabe suggested school visits
1) where only teacher has been prepared, class has not
2) where teacher and class are prepared
3) no preparation of teacher or class, both involved in new experience.
Binocular window suggested for demonstration use.
Possible color keys in demonstration areas related to subject.

Tony Rinaldi was eager for each visitor to do his own programming. Stressed the importance of choice for feeling of power and responsibility in learning.

Al Templeman suggested importance of EPOCH for beginning discovery and research training where demonstration gives orientation and "discovery corners" with opportunity and guidance for individual exploration and learning.

Tony Rinaldi - Feed-back will be implicit in the choices the student makes. The stations should be planned choices for self-testing and evaluation. Tape suggested as way to get reactions of individuals and discussion. Choices could perhaps be mechanically noted.

Bob Hall raised question, "This is all so exciting, it seems almost like fun"? (Answer by many - EPOCH is designed to reveal the enjoyment of learning and to help teachers and students alike toward broader perceptions and more active pursuit of total learning.)

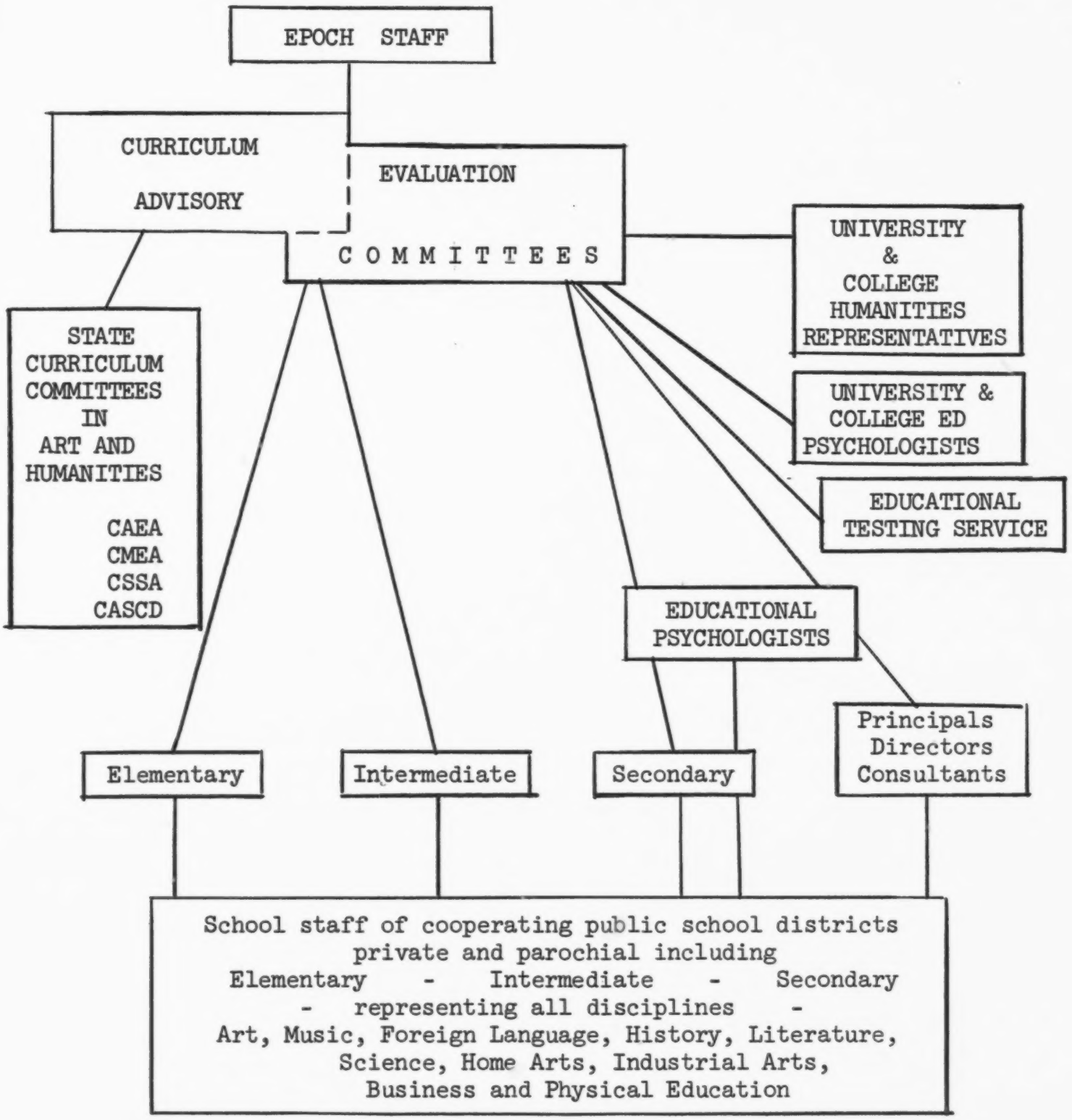
Dorothy Bennett referred to the serious educational objectives outlined on Page 8 of the application and all agreed that the approach should be stimulating, different, thoughtfully planned and knowledgeably directed.

Summary of Meeting

EPOCH will explore all kinds of innovative approaches to learning.
1. Different kinds of learning situations using visual and auditory aids.
2. Give relationship in the growth of ideas.
3. Stress the parallel quality in history; not only its sequential aspect.
4. Offer opportunity for discovery and increase in perception and awareness.
5. Aid teacher training to enlarge the possibilities for students. Provide opportunity for participation and involvement.

Curriculum level discussed for grades 4-5, 7-8, 9-12.
We will be sure to relate to the subject areas of these grades but not to compartmentalize the material.
Geographical framework
World history and literature
California and the U.S.
Time-band: 1750-1850
Try to come to focus in significant related segments.

CURRICULUM AND EVALUATION PLANNING
INTERACTION



SCHOOL ADVISERS' GROUP

PAUL F. ALBRIGHT
A.V. Coordinator & Industrial Arts
Wood Lab. Teacher
Willard Junior High School
Berkeley Unified School District

DAVID BEERY
Teacher of English Literature
San Ramon Valley High School
San Ramon Valley

BROTHER JOSEPH
Foreign Language and Drama
De La Salle High School
Walnut Creek

SISTER FRANCESCA CABRINI
Literature
Holy Names High School
Oakland

JOHN L. CLEVELAND
Coordinator ESEA Title I
Berkeley Unified School District

STANLEY COHEN
Director of Art
Oakland Public Schools

MRS. HELEN CYR
Director of Instructional Material
Centers
Oakland Public Schools

JOAN CUNNINGS
Teacher of Social Studies and
Language Arts
Stone Valley Intermediate

HAROLD DAVIS
Principal
Stone Valley Intermediate
San Ramon Valley

CHARLES DOMINIC
Teacher of Art
Holy Names High School
Oakland

ARTHUR H. DOUGHERTY
Music Consultant
San Ramon Valley

MRS. KATHRYNE FAVORS
Coordinator - Intergroup
Berkeley Unified School District

ARMAND M. GENTILE
Teacher of World Literature, History
and Drama
Monte Vista High School
San Ramon Valley

NORMAN T. GILBERT
Teacher of Language Arts and Drama
Stone Valley Intermediate
San Ramon Valley

ALLAN GOLDSTEIN
Coordinator of Library Services
Berkeley Unified School District

VIRGINIA G. GREGORY
Teacher of Art and Humanities
San Ramon Valley High School
San Ramon Valley

ROBERT HALL
Teacher of Art
Charlotte Wood School
San Ramon Valley

THOMAS HAYNES
Secondary Music
Berkeley Unified School District

GEORGE KRESHKA
Consulting Teacher - Elementary
Mathematics and Music
Berkeley Unified School District

SARA McGRAGH
Teacher
Anna Head School
Berkeley

JOANNE McHENRY
Library Consultant
San Ramon Valley

ASTOR MIZUHARA
Consulting Teacher
General Upper Elementary
Berkeley Unified School District

GEORGE NOONE
Supervisor of Instructional
Materials
Oakland Unified School District

CHARLES OLIVER
Stone Valley Intermediate Vice
Principal
San Ramon Valley

ROBERT PEARL
Art Curriculum Associate
Berkeley Unified School District

ROBERT A RAJANDER
Industrial Education
Curriculum Associate
Berkeley Unified School District

ROBERT RICE
Science Consultant
Berkeley Unified School District

ANTHONY T. RINALDI
Consulting Teacher in Science
Berkeley Unified School District

DR. JOSEPH N. RODEHEAVER
Director of Secondary Education
Berkeley Unified School District

ROBERT SHOGREN
High Potential Elementary
Berkeley Unified School District

SISTER MARY CHRISTINE
SISTER ROBERTA MARIA
History Instructors
Holy Names High School
Oakland

MRS. PATSY TANABE
Consulting Teacher
Elementary Art & Social Studies
Berkeley Unified School District

AL. F. TEMPLEMAN
Teacher of Humanities and Art
Skyline High School
Oakland Unified School District

VIRGINIA THICKENS
History Curriculum Associate
Berkeley Unified School District

MARTIN TUCKER
Consultant - General
Curriculum Elementary and
Secondary
San Ramon Valley

DR. HERBERT WONG
Principal
Washington - University Demonstration
School
Berkeley

MRS. ALICE ZOLLINGER
Elementary Curriculum Consultant
ESEA Title I
Berkeley Unified School District

EVALUATION

The curriculum consultants, administrators, teachers of the school advisory group and an educational psychologist have surveyed various types of evaluation instruments that might be used at EPOCH.

They reviewed techniques of appraisal including rating scales, interest inventories, questionnaires, judgment scales, interviews, controlled observation techniques, socio-metric techniques and anecdotal records.

The challenge of EPOCH as a behavioral setting lies in the variety of stimuli, opportunity for systematic interrelated learning situations, and opportunity for individual exploration. Evaluation will be attempted on the less tangible types of instructional outcomes, on the types resulting from self-initiated learning, self-instruction and self-evaluation, within the varied learning experiences, as well as the more obvious information content areas.

The student will have opportunity to use information in creative and critical thinking, problem solving, concept formation and developing value systems.

Among the instruments surveyed by the group are the following: These will be evaluated for their precise use and the possible effectiveness in the experimental situations under consideration in the EPOCH programs.

1. Interpretive tests covering interpretation of data, logical reasoning, critical thinking, and application of scientific principles.
   EXAMPLE: Watson-Glaser critical thinking appraisal

2. Interaction tests where the students react to verbalized statements or questions instead of direct measurement.
   EXAMPLE: What I like to do inventory

3. Standardized tests that measure achievement or attainment of instructional outcomes in various levels of success.
   EXAMPLE: Stanford Achievement Supplementary Test in Arts and Humanities

   California American Heritage Test

   California Geography Test

   Cooperative Social Studies Test

   California Tests in Social & Related Sciences and others

   Dimond-Pflieger Problems of Democracy Test

   Crary American History

   Cummings World History

4. Attitude inventories that measure emotional reactions and attitudes for development of desirable citizenship traits needed in student and adult life.
   EXAMPLE: Peltier-Durost Civics and Citizenship Test

   Thurstone Scales for Measurement of Social Attitudes

   Remmer Scales

Test of Social Insight

5. Listening comprehension as one of the vital channels through which information is received.

EXAMPLE: STEP Listening Test for Upper elementary grades

Brown-Carlsen Listening Comprehension Test for high school and college freshmen.

The committee is exploring the measurement of aptitudes, achievement and effective development through music, art and literature.

EXAMPLE: Seashore Measures of Musical Talents

Kwalwasser Music Talent Tests - form B for grades 4-6
form A for intermediate, secondary and adult

Meier Art Judgment

Graven Design Judgment

Horn Aptitude Inventory

Lewerenz Tests in Fundamental Abilities of Visual Art

Knauber Art Ability

Center-Durost Literature Acquaintance Test

Satterfield Objective Tests in English

Carroll Prose Appreciation Tests

Rigg Poetry Judgment Test

Cooperative Literary Comprehension & Appreciation Test

Inventory of the Arts

Social Beliefs Test

Study of Values

Thematic Apperception Test

California Psychological Inventory

Childrens Apperception Test

Until the visualizer for the pilot was developed, the total program and the actual identification of the learning stations could not be sufficiently described for the selection of final instruments. The pilot is now at a stage to provide the necessary base for evaluation.

In the extension period, evaluation and program development will grow hand in hand. When the student and teacher use of the pilot begins, preliminary test instruments will have been selected.

Educational psychologists in the cooperating school districts, colleges and the University of California are assisting the committee.

SELECTION OF STAFF

The professional staff had been working on the project for several years. When the application for the grant was designed it was logical for Dr. James Jarrett to be Principal Investigator; Miss Dorothy Bennett, Project Coordinator; Dr. Mark Luca, Research Coordinator; Miss Jeanne Palmer, Curriculum Coordinator; and Mr. Walter Thomas Brooks, Design Coordinator.

The EPOCH project started with limited operations in June 1966. Mrs. Audrey Gabor, Project Secretary, organized files and office procedures. Dr. Mark Luca started research plans and procedures.

The research assistants were hired on the basis of their academic backgrounds in the field of concentration and their interest and grasp of the concept of EPOCH. A summary of their backgrounds is listed on pages 8, 9 and 10, and some of their accomplishments for EPOCH on pages 12 and 13. The school advisers were invited to participate on the basis of need in meetings, laboratory work, research and as advisers. Consultants have been and will be contracted as the need arises.

The office staff was brought together on the basis of functions and services to support the research curriculum studies and program development functions as well as the administrative work, but also for a variety of supplementary skills and talents necessary to the development of the demonstration visualizers.

Mrs. Carlyle Rispoli has assisted Dr. Luca in the work of the researchers, receiving, recording and classifying their research materials and the EPOCH Data Cards. She has made layouts of various aspects of the demonstration visualizers. Mrs. Rispoli has solicited information on audio-visual materials and has interviewed suppliers. She has made layouts of various features of the demonstration visualizers, done lettering and renderings of several teaching features now in use. Her fine arts training and her travel experience have permitted her to augment her office skills to the advantage of EPOCH. In the pilot phase Mrs. Rispoli will be assigned to assist in resource research, to work with program activities requiring layouts, visualizers, and renderings, and to prepare art materials for presentations in instructional units.

Mrs. Nancy Curry also has fine arts training and has been able to give valuable services in the preparation of sketches, lettering, mock-ups and visualizers for use in the demonstration. Her experience in teaching has been valuable to the project as has been her work in research. Her travels have made her aware of the resource materials needed to fully implement the enrichment program. She has worked with Mrs. Gabor to make all necessary arrangements for rentals and purchases and to keep the EPOCH accounts in order. In the pilot program Mrs. Curry will give more time to assist in resource research and in the preparation of art materials for instruction.

Miss Diane Newhouse brings excellent office skills to EPOCH with steno-type, a high speed of typing, knowledge of all office machines as well as file planning and office management experience. Miss Newhouse will coordinate the office work and assist the staff with the preparation of all manuscript materials. She has excellent language skills, wide reading and travel, which make for understanding of the total objectives of EPOCH. In the pilot phase she will have increased responsibilities in the preparation of dissemination manuscripts and evaluation instruments.

SEARCH FOR RESOURCE MATERIALS AND EQUIPMENT

One of the most severe needs in the schools is for resource materials to support the enrichment program. The strength of the idea of EPOCH is determination to provide stimulus and opportunity, experience and guidance in a new kind of learning environment. And it will provide a large variety of learning situations with all manner of resource materials to support teacher directed and self-directed learning.

EPOCH's approach will not only be mindful of individual differences in learning--but it will be developed to span the entire range of student ability. It will serve the high potential, average and low achievers. There are great limitations in enrichment materials for the humanities in the Berkeley Unified School District collection, which is typical of almost all school districts. Science dominates the resource materials that are available commercially, and the Western cultures far outstrips the East.

The identification of suppliers who have suitable slides, films, filmstrips, loops, prints, tapes, records has been undertaken and some loan materials have been solicited. This has been accomplished through letters of inquiry and through the work of the researchers and school advisers on the EPOCH Data Cards.

Visits of suppliers' representatives is now being encouraged and guidance sought from teachers on evaluation of the various materials available.

NO FUNDS WERE ALLOWED FOR RESOURCE MATERIALS IN THE PLANNING PERIOD.

At present EPOCH's materials and a large part of its equipment is borrowed from cooperating schools. The staff has done some experimenting, but more time has been needed. Some material has been gathered through tape copies of borrowed phonograph records. Also experiments have been undertaken in short pieces of tape wound on notched and labelled 3 x 5 cards which have provided several voice and music sound mosaic pieces. These short lengths of tape can be played on a tape recorder without the bother or expense of using reels.

A great deal of time and attention must be given to this need, and funds must be available. The search must be made with a clear understanding of the purpose and the potential. Teachers can be helped to use a multi-media approach only if materials are known and easily available.

SEARCH FOR SPACE AND PROGRESS OF DESIGN DEVELOPMENT

Space thought reserved for EPOCH was withdrawn during the waiting period between application (Nov. 1965) and the grant award (April 1966).

Since it has been expected that the project could be housed by its sponsors, only a token rent had been included; therefore, commercial space was difficult to find.

A search was made for space which could serve the resource and curriculum activities but also permit the development of demonstration visualizers.

Fourteen hundred square feet in one room with 12 foot ceilings was found at 1900 Addison Street in Berkeley and was taken as of October 17. This served the office staff and also made it possible to go much further into the construction of rough visualizers than had been expected.

Design studies were undertaken as soon as the space was found and less than a month after the staff was installed, work on the experimental installation was begun.

Funds originally requested for such work had been cut out when the planning grant was reduced to six months; but permission to make some modest transfers was secured for materials and wiring.

THE DEMONSTRATION ENCLOSURE

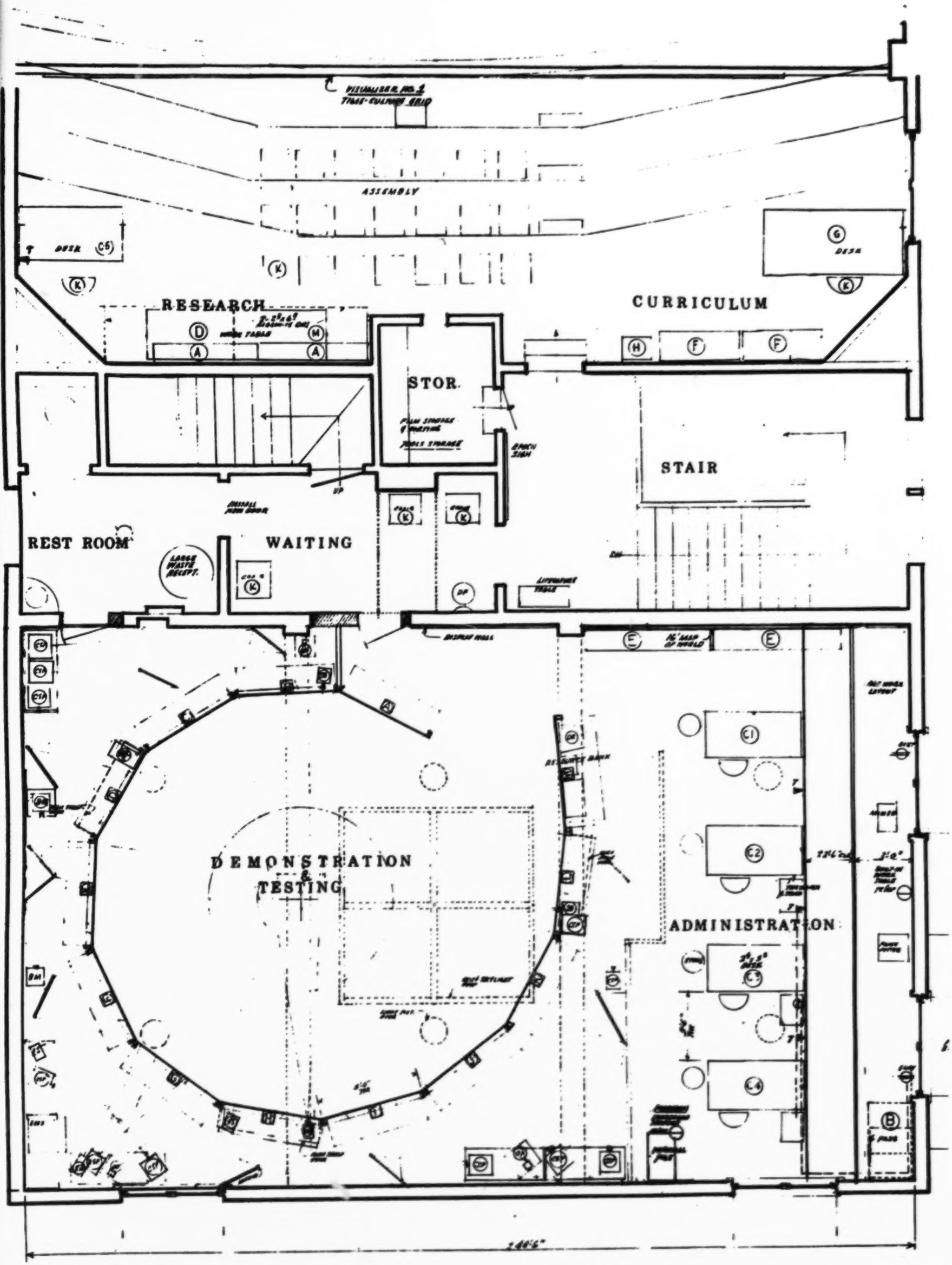
A circular enclosure, 22 feet in diameter of thirteen frames 5 x 10 feet was constructed. A variety of coverings for the frames have been explored to permit both front and rear projectors.

A cable for extra power was brought to the third floor space and wiring installed sufficient to operate the projection equipment (as well as desk lamps, typewriters, heaters).

EPOCH ORIENTATION TABLE

Work was also begun on the EPOCH orientation table - a round table, nine feet in diameter. On its teaching surface concentric circles represent bands of time (like the rings of a tree), expanding from 100,000 B.C. at the center to 1970 at the periphery. It is divided into pie-shaped pieces for Africa, Asia, Australia, Europe and the Americas. Here the concept of interlocking time and space around the world is being developed to show important milestones in human achievement.

All the fixtures have been planned and constructed to make it possible to remove them for use elsewhere.


ASSEMBLY
DESK
RESEARCH
CURRICULUM
STOR.
FILM STORAGE & SHIPPING
TOOLS STORAGE
STAIR
REST ROOM
WAITING
LARGE WASTE RECEPT.
DEMONSTRATION & TESTING
ADMINISTRATION
46'-6"

CONSULTANTS

Many, many man hours of excellent consultant time have been given to EPOCH without charge in this brief planning period. Experts in many fields have been most cooperative - recommending others who might help, putting us in touch with specialists, and with suppliers. A glance at the brief sample of the EPOCH Calendar in the Appendix will show some of these directions as will the notes in Part II.

Formal engagement of consultants on a fee basis has been slow in getting underway for several reasons. First, redefinitions of goals was being formulated by the staff guided by researchers and discussed with school advisers. Secondly, a letter prepared to go to 15 experts in its first mailing carried a prompt sheet (too brief to be considered a questionnaire). The prompt sheet required approval which has been many weeks in reaching us.

On the basis of the reply to this letter, further contact will be developed with those who indicate the most interest and offer the most promising information. The contact will be by letter, phone, questionnaire (with written or taped reply), by interviews and visit to EPOCH, and, in some instances, visits of EPOCH Staff to the consultant.

anthropology	5	library	8
archeology	3	languages	14
architecture	6	museums	13
art	14	music	6
audio-visual	12	philosophy	3
dance	11	political & soc. sci.	3
dramatic art	14	religion	6
education	22	psychology	6
geography	8	technical	2
history	15		171 Total

And, thirdly, because we have felt not yet ready to clearly demonstrate the direction and methods which we hope to pursue. Now the first stage of researchers' work is virtually completed. The school advisers have helped to find a preliminary focus for the demonstration and the demonstration chamber is at least indicative of our intentions.

Now that we have our time extended, the consultant work can be developed to make best use of their guidance and of our funds.

PART II

2. Briefly describe project endeavors in which the anticipated results have exceeded expectations, and those in which results have not measured up to expectations.

There have been numerous ways in which the project's endeavors have exceeded expectation.

a. The amount of expert guidance that the researchers have given for minimal fees. Their continuing interest and promise of future assistance and their effective use of EPOCH Data Cards.

b. The enthusiastic and constructive way in which the school advisers have not only applied themselves to the task of curriculum study, but also the almost missionary zeal with which they have widened the areas of their own interest, sought to involve others in the project and already begun to effect the work in their own schools.

c. The creative ideas keyed to sound educational approaches that have resulted from the long Saturday work sessions followed by volunteer work in many areas.

d. The generosity with which districts have loaned equipment for experiment, advisers and staff have loaned personal books, films and equipment.

e. The effectiveness with which administrators and teachers have worked together to identify needs and to discuss ways to meet them.

f. The excitement engineered in the current group by the discussions of the possibilities of ways for enriched teaching in all grades of all types of student learners--high potential, average and low achievers.

g. In one high school the participation of the staff in EPOCH discussion resulted in the introduction of two new courses based on interdisciplinary approaches and cooperative teaching among several departments.

h. Unfortunately, we have not yet found a satisfactory way to keep in view as much information on the EPOCH orientation table as we would like. Several approaches are being tried.

i. Nor have we worked out a satisfactory way to suggest or measure follow-up activities at EPOCH learning stations. Several are now in work.

j. Time has been too short to make as much progress as hoped for in development of community relations or the building of a future support structure.

Perhaps the way in which the planning activities most exceeded expectations was in the actual erection and partial development of the demonstration chamber.

Visitors in early January have been able to actually see, hear and feel at least the beginnings of what Project EPOCH discussed in its initial proposal. Pictures following pages (taken December 31, 1966) show a group at work within the enclosure frame.

PART II

3. Report the effect of the project on the educational institution or agency by describing what you consider to be the greatest change resulting from the project.

Even in the short span of four months of EPOCH planning there is evidence that the project can provide a strong stimulus for change. This was exemplified by the action of a local intermediate school principal who has been a member of the curriculum advisers group. He and his staff planned together to produce an action-study-resource area in the school directly inspired by EPOCH. A classroom immediately adjoining the library was remodeled and a copy of the EPOCH Resource-Data Bank is being made.

Teachers of language, music, social studies, arts and other subject areas are cooperating to develop the interdisciplinary organization of resource materials.

This concrete example is made more interesting by one principal's remarks in expressing his interest and appreciation of EPOCH planning sessions.

> "The discussions in our meetings have given me a whole new slant as a principal to provide creative leadership."

4. Report the effect of the project on the cooperating agencies by (1) listing all the community agencies that cooperated in the project, and (2) discussing the results of such cooperation.

(1) Berkeley Unified School District Library Center, Curriculum Center, and Instructional Materials Center.

San Ramon Valley Unified School District Library Center, Monte Vista High School, Stone Valley Intermediate School, and San Ramon Valley High School.

Oakland Public Schools Instructional Materials and Library Center and Curriculum Center.

San Francisco State College Media Center.

San Francisco Museum, de Young Museum, Oakland Museum, San Francisco Junior Museum, Chabot Observatory, Oakland Junior Center of Art and Science, Oakland Recreation Department, Oakland Regional Council of the Arts.

University of California, Berkeley.

Brooks Foundation, Santa Barbara

California State Department of Education, Instructional Materials Center.

Far West Regional Laboratory

A.V. Electronics, McCune Sound Service, Cox Visual Company (COXCO), V.G. Electric, Edex Company, 3M Company, Recordak, IBM, Technifax, Sparta Electronics, Society of Visual Education (SVE), Key Sort Card System, Unisort System.

(2) Forty representations of Bay Area public, parochial, and private schools have participated in the planning of the EPOCH program.

Not only were the resource facilities of the school districts made available for EPOCH'S use, but districts provided equipment on loan and donated the services of consultants (worked at EPOCH during the school day). Basic classroom text and supplementary books, courses of study, teaching guides and resource materials were made available to EPOCH curriculum committee. The California State Department of Education Instructional Material Center through Dr. John Church, supplied valuable assistance and curriculum information.

Also the planning session of the California State Department of Education's cooperative conference with the California Art Education Association, Northern Area and California Music Educators were held at the EPOCH Center.

The University of California at Berkeley, Education Department provided office space for EPOCH during the early planning stages. The University and EPOCH are jointly planning a five week summer session in humanities using EPOCH as a basic laboratory.

The University has also extended use of their libraries, audio-visual center and museum facilities to the EPOCH Project. Dr. George Rusteika, /DEPUTY Director of the Far West Regional Labatory, has served on the EPOCH Senior Advisory Council at its inception.

The EPOCH Staff has participated in conferences sponsored by the Regional Arts Council which have dealt with community resources.

The California Association for Student Teaching (AST), Northern Section, has planned their spring conference on April 8 and has selected the EPOCH Center as one of the afternoon feature tours.

The California Art Educators of the Northern Area are meeting at EPOCH in January to focus on the project.

The California Social Studies Committee is meeting at the EPOCH Center in February.

PART II

5. Discuss how project information was disseminated. Include such information as (1) the number of unsolicited requests for information: (2) the number of visitors from outside the project area; and (3) the estimated cost of such dissemination.

A condensed outline of the EPOCH calendar gives a week by week indication of the activities, conversations, exchanges, meetings, visits and reports in the course of the PACE planning grant. The calendar extends into the future with some future listings.

Talks have been given by EPOCH Staff to the Oakland Art Association, the Oakland Humanities Teachers, Delta Kappa Gamma, the Oakland Recreation Department and Phi Delta Kappa. In the future, talks are planned for the National Art Education Association in San Francisco.

There have been several requests by groups to visit EPOCH. Among these are:

The United Nations Information Center
Bay Area Art Supervisors
Bay Area Social Science Teachers
California Association for Student Teachers

The last three groups requested that their monthly meeting be held at EPOCH.

Through letters and word of mouth we have received numerous unsolicited requests for information. Some of the names follow:

Mrs. Kathleen Devaney, University-wide Relations, University of California, who was doing a study of new teaching ideas.

Stephens Episcopal School, Austin, Texas

Walker High School, Atlanta, Georgia

Margaret A. Kiley, Director, Research in Art Education Program, The George Washington University, Washington, D.C.

N. I. Krevitsky, Director of Art, Tucson Public Schools, Tucson, Arizona

Mrs. Elizabeth Stebbins, PACE Project Consultant, Los Angeles County Superintendent of Schools Office, Los Angeles, California

W. Roberts Richmond, Project Director, Instructional Resources Center Feasibility Study, Wilmington, Delaware

Note- EPOCH has been omitted from every printed list of Pacesetters Projects that we have been sent.

Some of the interested people and groups who have had discussions with EPOCH and received material are:

Dr. Richard Mosier, Assoc. Prof., Education Dep't., University of California, Berkeley
Dr. Jack London, Prof., Education Dep't., University of California, Berkeley
Dr. Stephen Pepper, Prof. Emeritus, Philosophy and Art, University of California, Berkeley
Dr. Edward Barnhart, Speech Department, University of California, Berkeley
Dr. James Stone, Dir. Teacher Training, University of California, Berkeley
Dr. Walter Loban, Assoc. Prof., Education Department, University of California, Berkeley
Dr. John Michaelis, Prof., Education Dep't., University of California, Berkeley
Dr. Robert Ruddell, Reading Specialist, University of California, Berkeley
Mr. Alfred Partridge, Station Manager, KPFA, Berkeley
Mr. Martin Tucker, San Ramon Valley School District, Danville
Mr. George Noone, Audio-Visual Director, Oakland Public Schools, Oakland
Mrs. Helen Cyr, Director of Libraries, Oakland Public Schools
Oakland, Alameda, Contra Costa and San Francisco county offices

Among the many visitors to the present location of EPOCH are:

Mrs. Joan Steingard, Teacher (on leave), United Nations School, New York City
Dr. Germano Galler - Director Art Education, Brazilia, Brazil
Mr. Paul Finnegan - Art Department, San Francisco State College
Dr. John Keel - Art Department, San Francisco State College
Mr. Robert Kent - Art Teacher, Tamalpais High School
Dr. John Church - State Department of Education
Dr. Charles Moody - State Department of Education
Mr. Norris Nash - Mills College, Oakland
Dr. N.I. Krevitsky - Director of Art, Tucson Public Schools, Tucson, Arizona
Dr. George Rusteika - Far West Laboratory
Dr. Hemphill - Far West Laboratory
Miss Clair Isaacs - former Art Director, San Francisco Museum of Art
Mr. Robert Kent - Art Teacher, Tamalpais High School and doctoral candidate at the University of California, Berkeley
Dr. Enoch Dumas - Associate Head, Teacher Education, University of California, Berkeley

The EPOCH staff have made several visits to schools and businesses. Following are some:

Monte Vista High School
Stone Valley School
S.F. State - A.V. Dep't.
Foothill College
Chabot Observatory
Berkeley High School Library
Oakland Museum
Demonstration, Sandia Corp.
Dr. Tondow - Palo Alto
College of Arts & Crafts, Oakland
Mills College, Oakland
San Jose State College
Mt. Diablo College
Edex Corporation
Brooks Foundation
Recordak
San Ramon Valley High School

PART II

6. Describe the methods and procedures being developed to continue the project without Federal support after the designated approval period.

Work with community groups has been going forward, but this is an area where the staff felt that it was essential to advance our demonstration in order to properly convey the potential of EPOCH.

Meetings have been held with many leaders - a presentation has been made to Berkeley Art Commission, to the Oakland Recreational Department, to the Regional Parks and other possible cooperating groups.

It is really too soon in this period to have much to report except an enthusiastic interest and desire to cooperate on the part of most of the people who know the EPOCH goals and plans.

One major public institution in the Bay Area, now in period of expansion, has suggested that EPOCH might become a part of their activities. This is being reviewed.

The Berkeley Unified School District sees EPOCH as an integral part of the system and discussions have been centered on its possible development as a part of the Education Park now being investigated.

In the long range plan for EPOCH developed in 1964 and 1965 it was proposed that EPOCH might take many forms:

A mobile testing phase to be used throughout the state.

A school wing adjoining the library devoted to EPOCH -type functions.

A huge plant is described in the EPOCH application of February 8, 1966, for demonstration, exhibition, information retrieval, instruction by TV and many other functions.

7. List costs for grant period this narrative report covers.

$ 49,102 Total cost.

$ _____ Total non-Federal support.

$ _____ Total Federal support under Title III, P.L. 89-10.

$ 49,102 Total Federal support other than Title III. P.L. 89-10.

APPLICATION for EXTENSION

of the Planning Period

In mid-November EPOCH consulted with Dr. Calvin Nichols and Mr. John Thorslev of the Regional Office of PACE on the possibility of extending the planning period, WITHOUT REQUESTING ADDITIONAL FUNDS.

Although some work had been undertaken in the summer, the withdrawal of space which we thought had been assured and the difficulty of finding suitable facilities delayed the appointment of staff and set back some activities behind the planned schedule.

EPOCH staff felt that the most efficient use of funds would be to extend the period to permit the fullest possible development of the program. On the basis of liened funds to December 31, a budget projection was made. It was thought possible to transfer funds in such a way as to support the activities until April 30, 1967. The extension was granted.

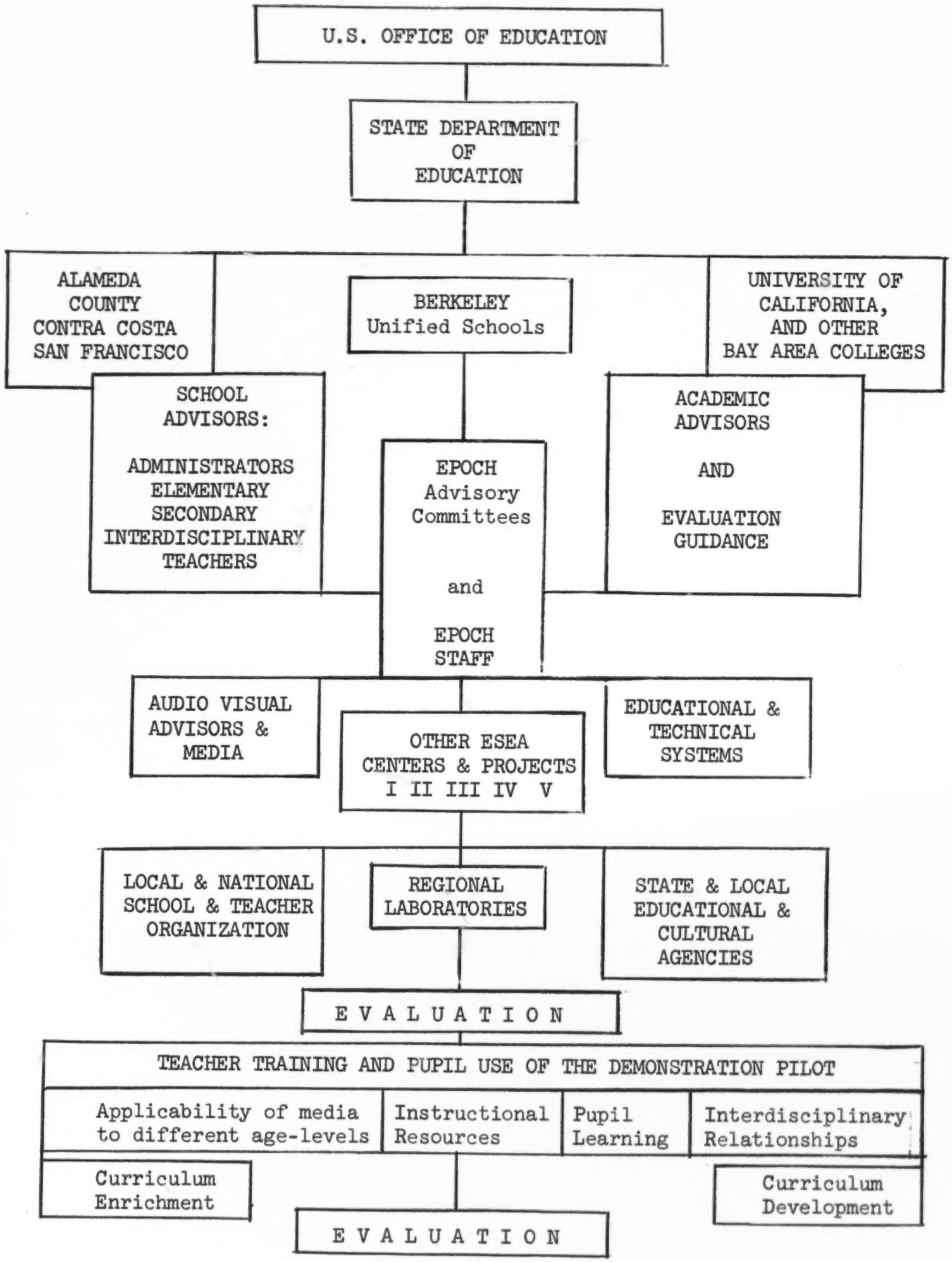
PART III

PILOT ACTIVITIES

BERKELEY UNIFIED SCHOOL DISTRICT
1414 Walnut Street, Berkeley, California 94709

E P O C H #1423
Grant Number OEG-4-6-001423-0912
C A L I F O R N I A
six months ending February 28, 1967
+ 60-day extension to April 30 on original funds

OPERATIONAL RELATIONSHIPS
OF PROJECT EPOCH



PART III (No Change)

1. Describe additional educational needs to be met in the proposed program.

   a. Interdisciplinary planning and cooperative teaching.

   b. Organization of resource materials for curriculum enrichment.

   c. Cooperation among administrators, teachers, librarians and AV specialists in planning.

   d. Help to teachers in the development of new teaching techniques.

   e. Cooperation between districts to share the ferment of new ideas and techniques.

   f. Institutes, seminars, workshops in cooperation with interdisciplinary teacher training programs of regional colleges and universities.

   g. Curriculum-based discovery programs for children to provide wider learning opportunities.

   h. Study existing EPOCH facilities and designs for individualized learning situations.

   i. Increased attention to development of evaluation instruments suitable to EPOCH-type exposures and learning opportunities.

   j. Full use of community resources.

   k. Support from business and industry.

PART III

2. Objectives as related to needs.

a. Demonstrate possibilities for cooperative teaching of art, literature, music, history and other disciplines.

b. Identify and integrate resource materials into curriculum-centered programs.

c. Associate people in all aspects of education in planning more closely knit interdisciplinary objectives in teaching the humanities at all levels.

d. Become clearing house for experimental work where ideas and strategies are continuously developed and tested.

e. Enlarge the school advisory group to include representatives of all districts at all levels to work together on all subjects and laboratory programs in humanities.

f. Lay out the working plans for cooperative seminars, institutes, workshops where local colleges offer teacher training programs in the humanities.

g. Develop methods for program development which can be adopted by teachers to supplement classroom teaching.

h. Work with the development of stations for individualized instruction areas of the demonstration and for testing the effectiveness of the self generated activities planned for each.

i. To have effective instruments for pre-visit preparation, on-the-spot testing and post-visit changes in behavior.

j. Disseminate information on community resources.

k. Encourage support for experimental educational programs by business and industry.

PART III

3. State in sequence the activities to be carried out in achieving these objectives.

A general order of progression is observed in the activities that follow, but many must run concurrently. A tentative calendar follows.

March to May

Pre-pilot preparation to improve demonstration. Resource research, prepare for equipment. Develop workshop plans. Experiment with program evaluation studies. Develop further interdistrict cooperation and relations with community agencies. Program study.

May and June

Purchase equipment and materials. Prepare for workshop. Program development. Evaluation procedures. Individualized instruction areas developed.

July

Summer workshop. In-service training. Resource search. Individual projects approach. Teaching strategies. Experimental student groups.

August and September

Prepare for classes. Program development. Changes in the plan of demonstration as result of workshop. Pre-visit of on-the-spot and post-visit instruments. Explore possible support structures and affiliation.

October to December 15

Class visits. School advisers cooperative planning and teaching. Evaluation. Interdistrict cooperation. Work on community relations. Possible foundation approach for specific services. Design development. In-service training plans and teaching education.

December 15 to February 1

Evaluation review. Program and design changes of demonstration as a result of evaluation. Plans for 1968-1969 reviewed in light of experience.

February and March

Classes again. Teacher labs, seminars, and workshop. Community meetings.
Review of possible affiliation and support structures.
Review of plans for operational phase. Design drawings.

April

Evaluation.

Work with school advisers, development of cooperation between school districts, reinforcing relations with local colleges, universities, museums and other educational agencies must underlie the entire period. Evaluation must be continuous. And there must be constant attention to building the support structure which can carry EPOCH after the pilot activities have tested its plan of operation and the operational phase has put the program into service.

A. Improvement of the demonstration areas

The features of the area are designed for orientation, exposition and exploration, a brief description of what we might term learning stations and these activities as planned there.

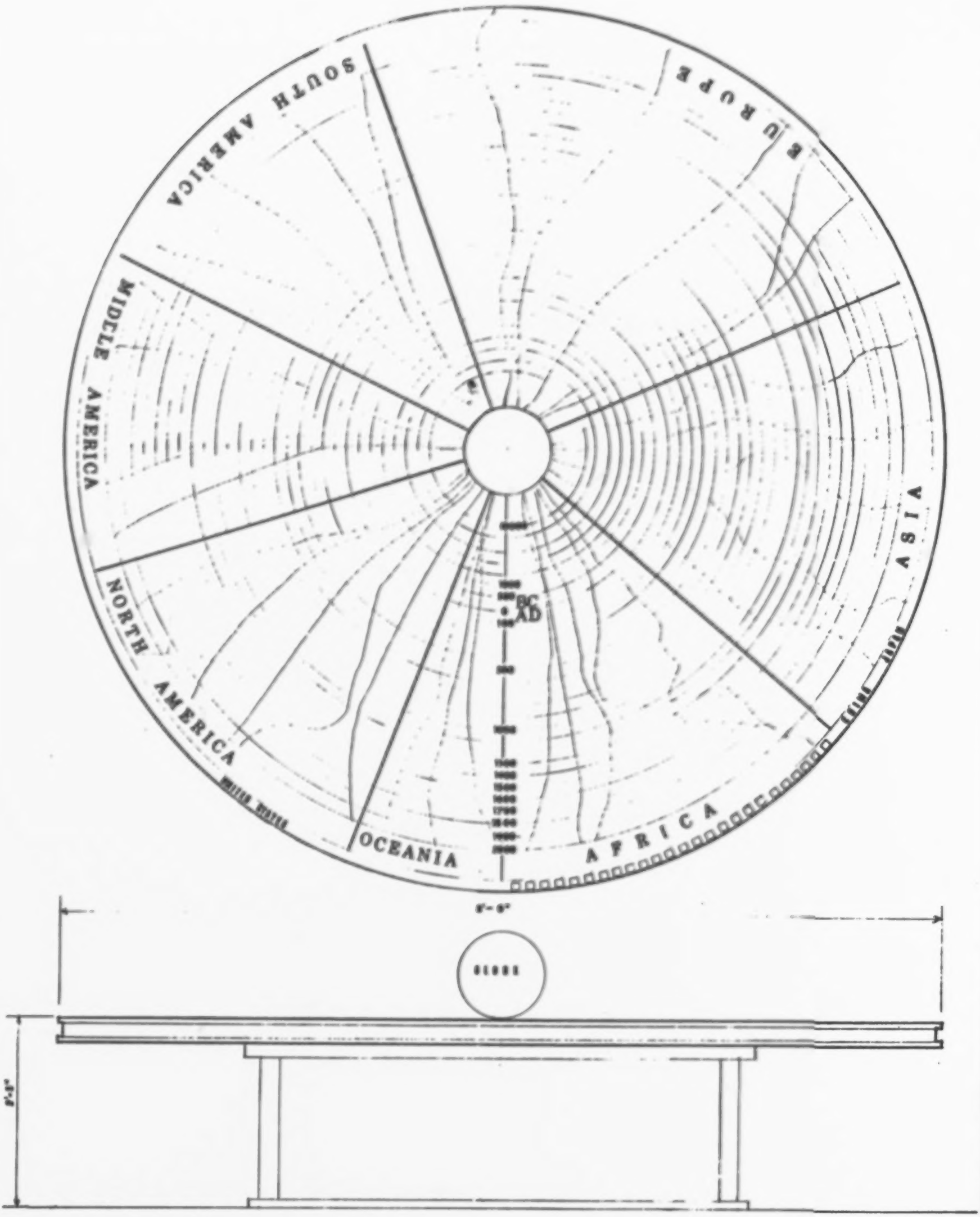
1. Entrance hall, an orientation area will give an introduction through visuals and sound telling what EPOCH is about. Art work and tape recordings must be prepared for here. As the program themes for the demonstration change, it may be desirable to make certain related alterations in the entrance hall message.

2. The demonstration enclosure, the basis panel frames in the 22' enclosure will be used as is. The panel coverings, however, will be improved. They are now display paper and a better surface for front and rear projection must be installed. Because of limitations of space mirrors must be used in some place. The angles must be set and the mirrors mounted. Equipment is now used on adjustable racks, but some permanent mounts can be made when we have our own equipment (all work to date has been with borrowed equipment--carousels, Technicolor 8 mm, etc.). Map mounts must be made, wiring (see page 25 and drawing following page 39) has been installed and in such a way that equipment can be used on almost every panel, but improved lighting must be worked out.

3. Orientation table, the 9' table (see page 25 and drawing on following page) must be mounted and the teaching surface rendered more permanently before July. Experiments are being conducted on most effective method to carry the information. Limited space presents a problem and several approaches are now being tried.

4. Resource bank, resource materials in easy reach for ready reference. This is the problem the resource banks attempt to solve. Several approaches are being explored. In one, the materials are stored at the base of the projection panel, keyed to a geographical area and organized chronologically with both keys in easy view. Here tapes, discs and various resource items can be stored and withdrawn either by the teacher or student in the chamber or by the projection attendant behind the panel. Space limits the amount of material that can be stored here.

   Another approach to the use of resources is shown on the next page--when very limited materials can be stored, but they can be organized to relate to the particular theme desired and studied with any of the viewers or recorders needed. The plan provides for the loading of the bank with materials as requested. Tapes, slides, discs, maps, prints, etc. could be obtained from the main storage area and made ready for or by a teacher who wished to examine a variety of materials. The loading could be changed.



DEMONSTRATION TABLE

5. Discovery corners. To provide opportunities for individual learning, EPOCH is designing a variety of learning stations. Each will have a central idea related to some aspect of the humanities. They will stimulate interest, increase information and, we think, aid in concept formation. Although most will have a single concept focus--they will all carry a suggestion for future action. Many ways of suggested follow-up activity will be tried and evaluation studies will attempt to trace their effect. These will include:

   a. Listening posts where tapes can be heard, either by push-button controls or possibly by cartridge loading. There may be an easy chair for relaxed listening or a shelf for short message units.

   b. View boxes. Lighted shadow boxes where the viewer may take some action--push a button, turn a switch, open a door, lift a cover, slide a panel, turn a crank, etc. Some personal involvement in addition to the viewing and perhaps, listening and viewing. Each of the view boxes will have some informational context, some suggestion for future action and some evaluation potential. They will relate to some aspect of the exhibition.

   c. Electronic matching charts which will provide a self-test aspect. Large (4') panels with 12 test points. The covers for the chart will be changeable, so it could be art or music, architecture or literature. These changeable covers could be inserted to suit the theme of a particular program or, on request, of a teacher.

   d. Texture table, the "feel wheel". The multi-sensory approach is so often seen only from the audio-visual angle. Here we expect to have all kinds of tactile stimuli, with imaginative teaching legends attached. For sand, the seashore, desert and geologic connotations will be noted, etc. This will be developed with Braille labels for the blind.

   e. 3-D collection, as loan and purchase permit. There will be three dimensional materials to be handled. On the orientation table and when suitable to be seen as a part of a display.

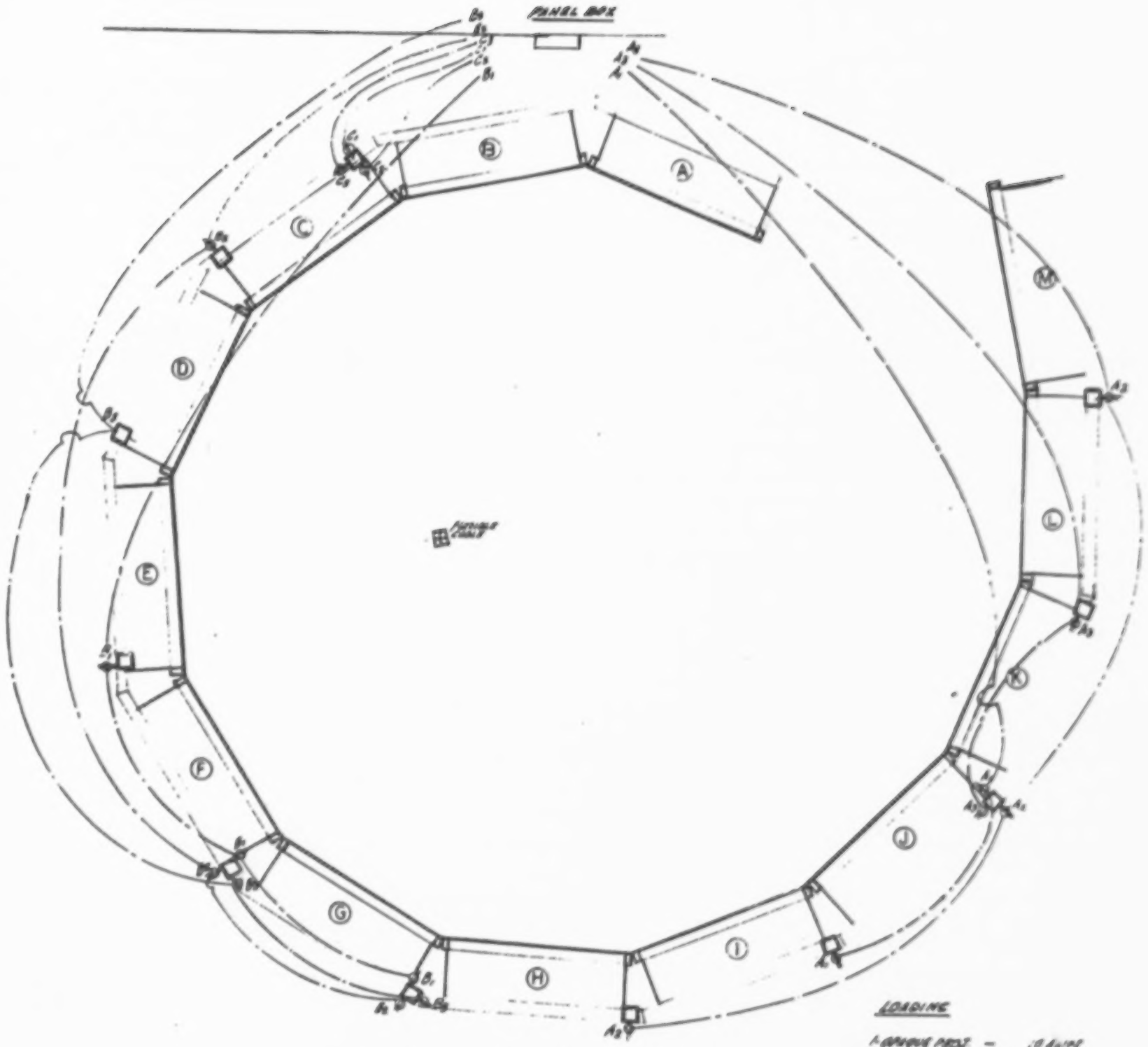
   f. Reference books and maps. One discovery corner will have picture books, maps, documents, journals--changed frequently to relate to change in themes of the exhibition.

B. Identification and location of resources

The need for resource materials will be greatly aggravated by the program scheduled for July. A basic collection is needed for the teacher training course planned for July. (One big problem is back-up budget and order time. Funding in April may just make it possible.) Some slides can be prepared before next period, but there were no funds for resource materials in planning grant.

C. Interdisciplinary planning

The school adviser group will be enlarged in this next period with representatives in art, music, literature, history and the other disciplines. Meetings will be arranged with the researchers and source



EPOCH DEMONSTRATOR
ELECTRICAL PLAN

Using the installation illustrated here it will be possible to produce constant images on individual panels, sequential progression of images around the panels or even panoramic combinations of these.

consultants to help work out the most important links between the disciplines. There will be discussions of religious effects on architecture as well as on music, the influence of the dance on architecture, history on art and music, and many similar influences.

Resource materials will be identified, purchased, developed to help implement these planning sessions.

D. Cooperative teaching

As a result of the work of the planning group, new approaches for cooperative teaching will be tried out by the advisers in their schools. Cooperative assessment of pupil needs and interests will be followed by joint assignments and numerous interdepartmental activities.

E. Interdistrict Cooperation

The districts' organization will be more closely knit. Dr. Sullivan is calling a meeting of Bay Area Superintendents to the county and city in the next month where many ideas for interdistrict cooperation will be discussed. The advisers have already pointed the way and there is much that can be done here.

F. Cooperation with other ESEA projects

Plans are now being discussed for cooperation with other ESEA programs in Berkeley. A conference has been held with Mr. Cleveland, Director of ESEA Title I, and his staff to discover possible areas for joint activities.

Mrs. Kathryne Favors, Coordinator of Intergroup Activities, is one of the EPOCH school advisers and is exploring the ways in which the intergroup program and EPOCH can be mutually supportive.

Culturally diversified areas in Berkeley, Oakland and San Francisco will be represented in the initial class experiments at EPOCH.

EPOCH wants to work closely with the Regional Laboratories.

G. Teacher Education

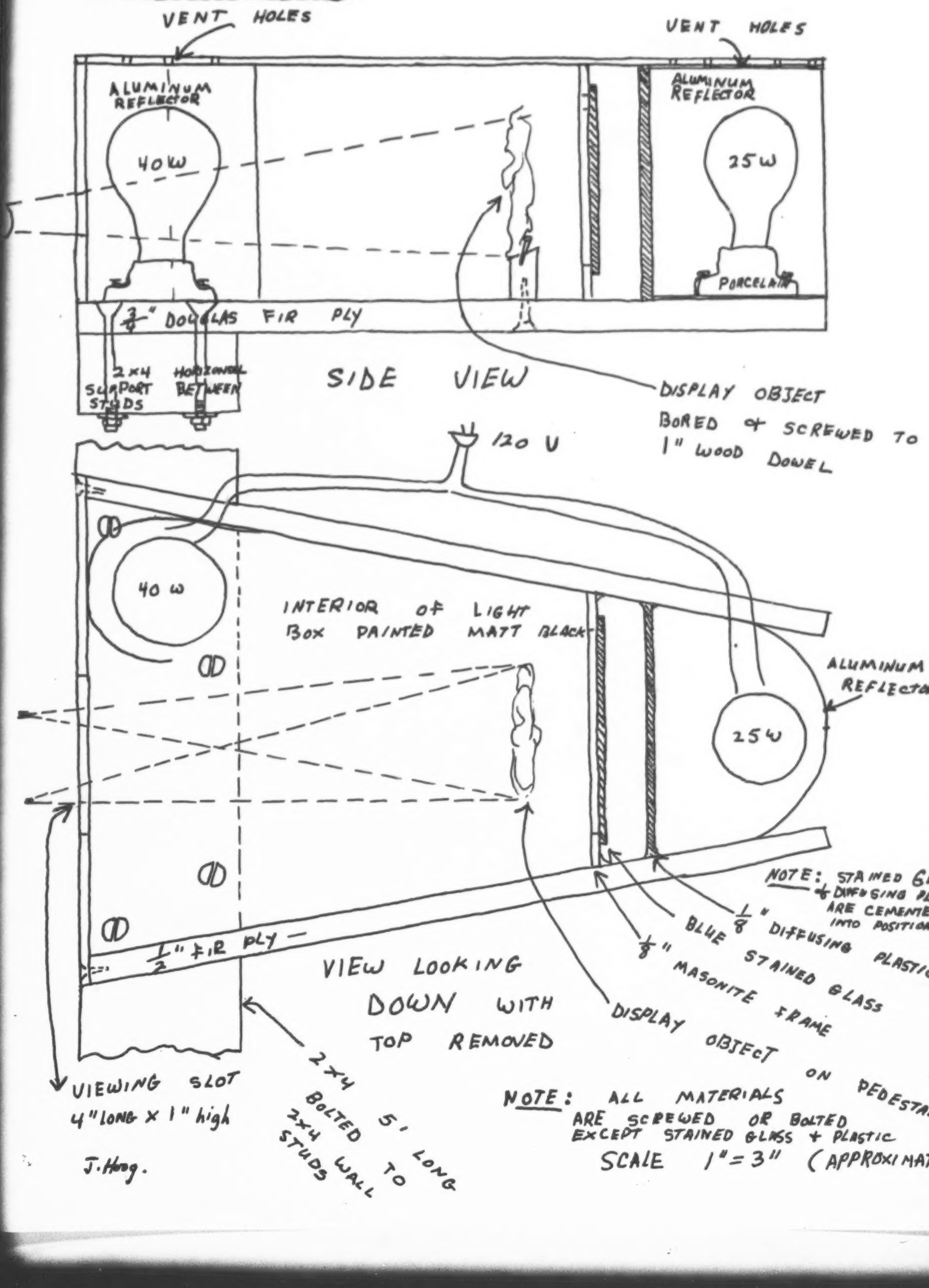
The first few months have shown that emphasis on teacher training will be advisable--

1. A summer workshop is now planned in cooperation with the University of California Extension Division for June 22, 1967 - July 21, 1967,* where EPOCH will provide a lab-like testing ground. This will point the way to the "clearinghouse" function on innovative methods, materials and equipment that is visualized as one of EPOCH'S valuable contributions.
2. Cooperation with the colleges and universities in the Bay Area will be developed in two directions with cooperative interaction from several colleges and the University. EPOCH will offer a unique experimental situation where new teaching strategies can be tried out, new equipment used (loans from manufacturers), new teaching aids developed. At the same time, the teachers in training and degree candidates in several fields can assist EPOCH'S studies while carrying forward their own.

* Reprinted as of 4.1.67

EPOCH VIEW BOX

JAN 67



J. Hoag.

H. Evaluation studies

Will also be continuous and from the findings the pilot will be changed to take advantage of the new information from student and teacher reactions as well as from the advice of consultants in various fields. The evaluation instruments themselves will be revised whenever necessary. The pre-visit preparation will take several forms: teacher-briefing, student-briefing, pre-visit testing. Not only the control group selection, but the visiting groups' selection will be on interdistrict and culturally diversified areas.

I. Consultants program

Consultants will be drawn-in throughout the entire period for guidance in academic, technical and systems fields. The researchers from the planning period will be called in and the core consultant groups will be identified. Program developmetn will be carefully reviewed. Audio-visual experts will be assisting in the planning of teaching devices. The EPOCH Data Card will have been continuously tested in use and studies of possible transfers to electronic data processing will be explored.

J. Education agencies and community support base

Constant attention will be paid throughout the period to increasing cooperation with educational agencies, such as libraries, museums and other groups. State and private educational agencies of all kinds will be invited to contribute to the planning and development activities. Involvement of state and national educational committees and organizations will be sought.

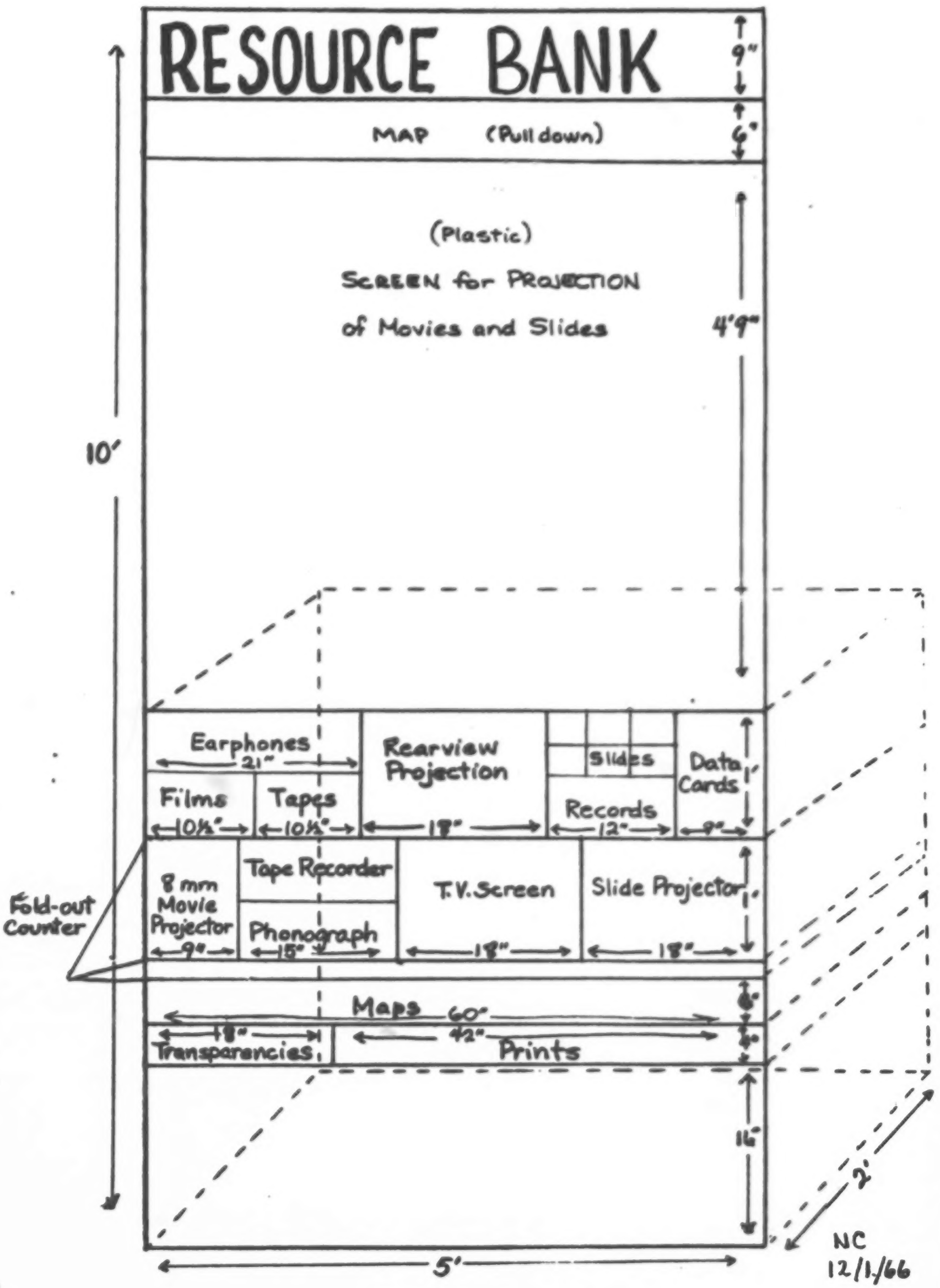
These activities will lend meaningful weight to the justification for a broader support base for EPOCH. Involvement of community leaders in the planning will be strengthened. Possibilities for supportive affiliations of numerous kinds will be investigated as will more complete sponsorship from the Bay Area communities.

K. Design drawings

On the basis of the findings of the year immediately ahead (February 1967 to February 1968) the success of most project activities can be assessed. If a move to another location for the demonstration is necessary for the expansion of the EPOCH services in the operational phase, this will be apparent. The direction that the operational phase should follow will be determined and design drawings can then be made before the close of the pilot period.

L. Dissemination

Will be undertaken on a continuing basis in 1967.
A monthly newsletter will be widely distributed.
Releases will be sent out when appropriate.
EPOCH will prepare leaflet description of innovative approaches, new teaching aids, and any ideas, features, findings, developments that would serve for adoption elsewhere. These will be announced in the newsletter and sent on request.


RESOURCE BANK
9"
MAP (Pull down)
6"
(Plastic)
SCREEN for PROJECTION
of Movies and Slides
4'9"
10'
Earphones
21"
Rearview Projection
Slides
Data Cards
1'
Films
10½"
Tapes
10½"
18"
Records
12"
9"
Fold-out Counter
8 mm Movie Projector
9"
Tape Recorder
Phonograph
15"
T.V. Screen
18"
Slide Projector
18"
1'
Maps 60"
6"
18"
Transparencies
42"
Prints
4"
16"
2'
5'
NC
12/1/66

PART III

4. Describe the method and procedures for evaluation.

The evaluation of the pilot activities will be under the direction of Dr. Wallace Beatty, Department of Educational Psychology, San Francisco State College. Curriculum consultants and school psychologists from each of the cooperating school districts will work with Dr. Beatty in the development of the evaluation procedures and instruments.

Contracted assistance of Educational Testing Service will be used where necessary.

Graduate students at the University of California at Berkeley, and neighboring state colleges will conduct research projects on evaluation in connection with EPOCH Project.

In addition, the evaluation will consist of the following reports:

A. The Project Coordinator will submit a statistical summary on the number of school staff, students and members of the community using the pilot demonstration. The report will also include complete information on the programs, materials and services developed during this experimental stage, as well as a description of those aspects of the pilot activities discovered to be most effective and suitable for incorporation into educational programs elsewhere.

B. The School Coordinator will report on the evaluation directed toward determining changes in teacher and student behavior and attitudes as they acquire understandings and skills of interdisciplinary, multi-sensory and more individualized instruction at the EPOCH Project. The extent and estimated effectiveness of their participation as seen by the local school administrators, teachers and the students themselves will be included.

C. The Research Coordinator will submit information outlining and evaluating the data gathered for use in the EPOCH Project and cooperating agencies. The processing of these resource materials in relation to their application to the program and educational goals will be included in making recommendations reflecting needs for the production of materials unavailable to date.

D. The Design Coordinator's survey will include innovative design solutions to instructional needs in the use of the most advanced technology and systems.

These reports will be important factors to bring forth the strengths and weaknesses of the project and will provide directions for maintaining continuous progress and revision.

Selections from the EPOCH CALENDAR

June - July, 1966		ML carries on part-time research work for EPOCH, including the arrangement of material in Time and Space file and the development of the EPOCH Data Card. In consultation with Dr. Jarrett, ML explores potential researchers and consultants. ML makes visit to Berkeley Unified School District for instructions for accounting procedures, files and records, assisted by Mrs. Audrey Gabor, part-time secretary to EPOCH. ML consults with representatives of Key Sort card system and Unisort card system.
July		JP is active in Humanities Workshop at San Ramon Valley Schools. WB designs EPOCH Stationery which is now ready for use. First reproduction of EPOCH Data Card. Discussion regarding more efficient use of researchers if EPOCH employs specialists in own field on own time instead of four research assistants half-time in office.
August	26	DB reports for work on full time basis. Further development of EPOCH Data Card. List begun for curriculum advisers. Tentative schedule planned involving space, office needs and equipment.
September	1	Full-time operation of EPOCH office begins. Search for space at U.C. and at Berkeley Schools is resumed.
	15	Letter to Mr. Johnson regarding payment of professional and non-professional staff.
	16	EPOCH Data Cards are ready for experimental use.
	20	1 PM meeting with Dr. Tondow, Mr. Rinaldi, Palo Alto Schools.
	22	Letter to Mr. Johnson regarding payment of school advisers, researchers and consultants.
	23	Noon meeting with Community Leaders- Bostick, Williams and Sibley. Search for office and demonstration space ends with 1900 Addison Street, third floor.
October	4	EPOCH Data Card printed in final form, and ready for use with researchers and school advisers.
	5	8:30 AM meeting with Mr. Norris Nash, Chairman of Oakland Museums Board
	7	9:30 AM visit to S.F. State Media Center, interview Dr. Zettl 11:30 AM meeting with Dr. Ball, new BUSD Supervisor Title III
	10	JP originates billing form to be used for payment of researchers, consultants and school advisers. Meeting with curriculum consultants.
	11	11:15 AM meeting with Dean Smelser and Dean Jarrett
	17	Rent begins at 1900 Addison Street.
	19	2:30 PM visit to Monte Vista High School to see demonstration of AV equipment
	21	Evaluation discussion and interview with Dr. Wallace Beatty, S.F. State
	28	EPOCH Staff moves into quarters at 1900 Addison Street.

November 4 — 9 AM appointment with Mr. Goldstein, Berkeley High School Library
Also, discussion with Miss Kalamaris
3 PM appointment with Mr. Norris Nash and Dr. Brown, Director of Oakland Museum regarding possible interaction with EPOCH.

November 15 — 11 AM appointment with Mr. Monfort, newly appointed Director of Instructional Materials for BUSD
WB and Tony Rinaldi confer with Dr. Dan Peck at S.F. State

16 — Meeting at Burlingame with Dr. Wickline, Statewide offices of Title III PACE.

17 — 8 AM Meeting of Stan Cohen, Dr. Foster and Miss Branson at EPOCH.

18 — 9 AM appointment with PACE, Title III. Dr. Nichols, Mr. Thorslev and EPOCH Staff meet to discuss extension of project.
1 PM appointment with Mr. Tom Brown, Encyclopedia Britannica, to discuss loan of resources.
2 PM appointment with Mr. Robert Freeman of Denoyer, Geppert for loan of maps and other resources.

28 — 8:30 AM appointment with Mr. Vaughn Hamer, Berkeley High School Industrial Arts (Electronics), for suggestions for EPOCH.
12 Noon appointment with Mr. St. Martin, Berkeley High School woodworking teacher for suggestions for EPOCH.

December 1-4 — VG Electric installs wiring.

1 — Curriculum Committee review.
Lecture by Dr. Smelser on "Innovations in College Instructions".

2 — 2 PM meeting with Dr. Casiday of SVE, with discussion of loan materials. Evaluation meeting, Tucker, Davis, Palmer and Dr. Beatty.

3 — School advisers meet to discuss program.
Helen Cyr, George Noone and Martin Tucker, school advisers, meet at EPOCH.

5 — San Ramon Valley High School and Monte Vista High School Humanities meeting.
1 PM meeting with Mr. Peterson, Dr. Ball and Dr. Bachelor to review accounting and to discuss extension.

7 — 3:30 PM presentation of Humanities Course to SRUHS, Academic Senate
7 PM to 10 PM meeting with Dr. Moody of the California State Department of Education.

9 — 8 AM Stoney Valley Faculty Meeting on Humanities and EPOCH Coordination.
9 AM appointment with Dr. Hatfield to review projection problems, with Mr. George Noone of the Oakland AV Department.
10 AM appointment with Mr. Alexander of AV Electronics.
12 Noon appointment with Mr. Tucker and Mr. Davis for Evaluation meeting.
11 AM appointment with Miss Helen Cyr of Oakland Libraries and Dr. Church, Curriculum Development Committee, California State Department of Education.
WB takes trip to research projects in Los Angeles.

	10	Meeting called by State Department of Education for Title III and PACE Centers with the California Art and Music Educators Association
	10-11	Phi Delta Kappa meeting at Monterey, EPOCH report
	12	1:30 PM appointment with Mr. Brown of McCune Sound Service.
	13	JP, V. Gregory and M. Tucker attend programming demonstration at Sandia Corporation in Livermore.
	14	9:30 AM appointment with Mr. Stamps and Mr. Alexander of AV Electronics regarding projector problems. Dr. Oberlander of U.C. gives suggestions regarding the geographical approach.
	16	10 AM appointment with Dr. Jarrett regarding the educational approach.
	19	first draft of script tape and pic suggestions for demonstration with EDEX programmer. 10 AM meeting of Al Gentile, Tony Rinaldi, JP, DB, ML, WB. 4 PM visit from Dr. Galler and Mr. John Keel.
	27	Curriculum Advisory Meeting in Sacramento regarding EPOCH and Arts and Humanities
	28	7:30 AM discussion with Dr. Richard Foster regarding workshop and other plans for 1967-68.
January	3	1:30 PM appointment with Mr. Cox of Cox Visual Company.
	5	8 AM appointment with Mr. Monfort and Dr. Jarrett 9 AM appointment with Dr. Sullivan and Dr. Maves. Draft application
	6	10 AM appointment with Mr. McHenry and Dr. Goldstein.
	7	9 AM to 1 PM meeting of curriculum advisers, expanded group.
	10	9 AM appointment with Mr. Thorslev, Dr. Nichols, Mr. Monfort and Dr. Jarrett.
	11	Evaluation with school psychologists of Berkeley and San Ramon
	12	1:30 PM appointment with Mr. Brown of EDEX Meeting of California Extension Division
	13	Final Mimeo of application
	16	San Ramon Valley Board Meeting
	20	9:30 AM meeting of Art Supervisors
	27	9:30 AM College of Hayward, Mills, San Jose, Arts & Crafts and Mt. Diablo meeting
	28	9 AM to 1 PM school advisers meeting
	30	2:30 PM Museum meeting
February	3	County meeting of San Francisco, Contra Costa and Alameda
	6	Dr. George Rusteika and Dr. Hemphill of Far West Regional Laboratory come to EPOCH.
	20	Meeting of researchers and Mr. Monfort
	25	10 AM meeting of East Bay Council of Social Studies.
March	19-24	National Art Conference - EPOCH Exhibit planned and report and panel.